

AOK MODEL T806

Battery Tester With Printer *User's Manual Version 1.1*



Caution

This analyzer is used to test 12 volt automotive batteries. A freshly charged battery will show a higher than normal voltage. If this is the case, turn on headlights for a few minutes to allow the voltage to stabilise.

Always connect directly to the leads of the battery terminals, as connection to a remote post or vehicle ground will affect test results.

This analyzer has four functions:

- Battery test
- Charging system test
- Start system test
- Maximum load test.

The battery test results can be printed off using the inbuilt printer. The date and time of the test are recorded on the print-off.

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Introduction

Battery Analyzer Specifications

DC Voltage: 9V-18V

Working Temperature: 0°C to + 50°C

Accuracy: $\pm 0.5\text{m}\Omega$

Frequency Of Testing Range: 100Hz

Packing Dimensions: 320 x 240 x 55mm

Product Dimensions: 207 x 103 x 37mm

Battery Suitability

This battery analyzer is suitable for batteries using the following capacity rating standards and ranges:

- **CCA:** 100-1700
- **IEC:** 100-1000
- **EN:** 100-1700
- **JIS:** refer to the conversion table for CCA figures
- **DIN:** 100-1000
- **Unknown:** If rating standard and range is unknown, the tester will show state of charge (SOC), internal resistance and the measured voltage, but not the state of health (SOH).



Note: *This information is normally found on a sticker on top of the battery.*

Product Features



1. Thermal paper roll holder and slot
2. Display shows options and data output
3. Right key for selecting functions and data
4. Left key for selecting functions and data
5. Exit key for clearing memory and exiting functions
6. Enter key for confirming functions and data
7. Protective outer body.

Installation and Testing

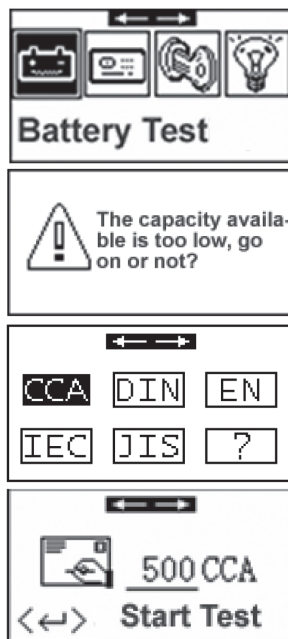
Installation

Connect the clips to the appropriate battery terminal or post; red to positive, black to negative. Once the battery analyzer initialises, it will display the **Language Selection** screen. Select your language and press **Enter** to enter the main menu. To select one of the four test functions, use the **L** and **R** keys. Use the **Enter** key to select the test function required.

Battery Test

 **Caution: Ensure the vehicle's ignition and all electrical equipment is switched off.**

1. Select **Battery Test**, then press **Enter**.
2. If the battery voltage capacity is too low, the tester will display a warning; it is recommended to charge the battery for an accurate assessment of the battery condition. Press **Enter** to continue.
3. Select the battery capacity rating standard; there is a choice of five capacity rating standards - refer to Battery Suitability on page 4. Press **Enter** to continue.
4. Select the battery capacity rating (e.g. 500CCA), and use the **L** and **R** keys to increase or decrease the capacity rating in steps of five at a time. Press **Enter** to start the test.



5. The results of the test will be shown on the display:
- **SOC:** State of charge
 - **SOH:** State of health
 - **CCA/IEC/EN/JIS/DIN:** Cold cranking as measured on the test
 - **V:** Battery voltage as measured on the test.
 - **r:** internal resistance.

Testing Pleas Wait...	
SOC=6%	SOH=2%
CCA=49A	V=11.86V
r=55.44mΩ	
Charge and retest Press "←" to print	

 **Note:** *If the voltage is low, a charge and retest message will be displayed with the test results.*

State of Health (Battery Condition)

Battery Condition	Results Displayed	Advice
SOH > 80%	Great	Battery in peak condition
SOH 60%-80%	Good	Serviceable/good
SOH 45%-60%	Caution	Poor condition/ replace soon
SOH < 44%	Suggest Replacement	Replace battery

6. Select if you wish to print the results. Press **Y** to confirm, or **N** to exit.

Testing

Charging System Test

1. Connect analyzer to battery terminals.
2. Select *Charging System Test*.
3. Start the engine and bring it to 2000RPM for about 15 seconds.
4. Analyzer displaying a countdown to 00.
5. Continue to idle engine whilst test results are being displayed.
6. After testing, three kinds of results will be displayed.
 - Overcharging: if the test result of maximum voltage is above 15.0V this indicates overcharging. Check and/or test the voltage regulator.
 - Low Charging rate: if the test result is below 13.3V this indicates a low charge rate. Check the connections, wiring and alternator.
 - Charging system is OK: the charging system is normal.
7. Continue to idle the engine whilst printing test results. Press Y to confirm, or N to exit.

Charging System Test

Vmax=12.35V	<15.0V
V =12.32V	
Vmin =12.30V	>13.3V



Note: *If the test commences before engine is started, then the Vmin (minimum voltage recorded) will show an artificially low reading because of the starter motor load.*

Start System Test



Caution: *Ensure the vehicle's ignition and all electrical equipment is switched off before starting this test.*

1. Select *Start System Test* and press Enter.
2. Follow the instructions as they appear on the display.

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3. Start the vehicle's engine.
 4. The start voltage will be displayed. If the figure is above 8.0V then the starter system is OK. Below 8.0V indicates a faulty starter system. If this is the case, check all connections, including the main battery and grounds connections, wiring and the starter motor.
 5. Select if you wish to print the results. Press Y to confirm, or N to exit.

Start system Test

Current.V: 11.97V
Start: 11.97V
Vmin> 8.0V

Maximum Load Test

1. Select **Max. Load Test** and then press **Enter**.
2. Follow the instructions as they appear on the screen.
3. Switch on all the vehicles electrical equipment (i.e. lights, heated rear screen, heater fans etc), then start the engine and bring it to 2000rpm for 15 seconds.
4. The Max.load voltage will be displayed. If the figure is below 12.8V, then check the circuit connections, including the main battery and grounds connections, wiring, the alternator and also check the alternator belt is not slipping.
5. Select if you wish to print the results. Press Y to confirm, or N to exit.

Max.load Test

Current.V: 11.97V
Full open: 11.97V
Vmin>12.8V

Maintenance

Adjusting Date and Time

1. Press and hold the **Exit** key, then connect the analyzer to a suitable battery.
2. Use the **Exit** key to select the parameter, then use the **L** and **R** keys to change the selection. Press the **Exit** key again to go to the next parameter to be changed.
3. Press the **Enter** key when finished to finalise changes.

Replacing the Thermal Paper Roll

1. To access the paper roll, slide the access cover up and away from the battery analyzer.
2. Connect the analyzer to a suitable battery. Place the cut edge of the new paper roll under the black rubber roller.
3. Press the **Enter** key to feed the paper through the rollers.
4. Replace the cover and tear off any excess paper.

Appendix

Conversions Tables of Battery Size Range

EN and DIN Conversion Tables									
Specification			CCA		Specification			CCA	
Type	Same Type		DIN	EN	Type	Same Type		DIN	EN
52805	52815		180	240	56420	56322	88066	300	510
53517			175	300	56530	56618	56638	300	510
53520	53521	53522	150	240	56618	56619	56620	300	510
53625	53638	53836	175	300	56633	56647	56641	300	510
53646	53621	88038	175	300	56820	56821		315	540
53653	53624	53890	175	300	57024	57029		315	540
54038	54039		175	300	57113	57539		400	680
54232			175	300	57114	56821	88074	400	680
54313	54324	54464	220	330	57218	57219		420	720
54317	54312	88146	210	360	57220	57217		420	720
54437	54466	54459L	210	360	57230			380	640
54459	54434	88046	210	360	57412	57413	57412L	400	680
54469	54449	54465	210	360	57512	57513	57513	350	570
54519	54533	54612	210	360	58515	58424		450	760
54523	54524		220	300	57521	58513		320	540
54537	54545	54801	190	300	58522	58514		320	540
54551	54580		220	300	58815	58821		395	640
54533	54577	54579	220	300	58820	58515	58521	395	640
54584	54578		220	300	58827			400	640

EN and DIN Conversion Tables Continued

Specification			CCA		Specification			CCA	
Type	Same Type		DIN	EN	Type	Same Type		DIN	EN
54590			210	330	58838	58833	88092	400	640
54827			240	360	59040	59017	59018	360	600
55040	88056		265	450	59218	59219		290	480
55041	55042		220	360	59226	59215		450	760
55044	55414	88056	265	450	59514			320	540
55046			300	510	59518	59519		395	640
55056			320	540	59615	59616		360	600
55057	54827	88156	320	540	60018	30019		250	410
55068	55069	55548	220	390	66026	58811		440	720
55218			255	420	60044	60038		500	760
55414	55415	55421	265	450	60527	60528		410	680
55422	55566	55040	265	450	61017	61018		400	680
55428	55423	55427	300	510	61023	62529		450	760
55457			265	450	61047	61048		450	760
55529			220	360	62034	62038	62045	420	680
55531	55545	55559L	255	420	63013			470	680
55559	55530	88056	255	420	63545	63549		420	680
55564	55552	55563	255	420	64020	64317	64318	325	550
55564	55565	55548	255	420	64028	64035		520	760
55570	55567	55565L	255	420	64036			460	760
56012			230	390	64317	64318	64323	540	900
56048	56068	56090	250	390	65513			540	900
56049	56069	56070	250	390	65514	65515		570	900

EN and DIN Conversion Tables Continued

Specification			CCA		Specification			CCA	
Type	Same Type		DIN	EN	Type	Same Type		DIN	EN
56077	56530		300	510	67043	67045		600	1000
56091	55800		360	540	68032	38034		600	1000
56111	55048		300	540	70029	70038	70027	630	1050
56218	55092		300	510	70036	68040	68021	570	950
56219	56216		300	510	71014	71015		700	1150
56220			280	510	72515			680	1150
56225	56323		300	510	73011			740	1200
56318	56312	56311	300	510					

JIS Specification Conversion Tables

Specification		CCA			Specification		CCA		
JIS (New)	JIS (Old)		MF	CMF	JIS (New)	JIS (Old)		MF	CMF
26A17R		200			55B24RS	NT80-S6S	430	420	500
26A17L		200			55B24LS	NT80-S6LS	430	420	500
26A19R	12N24-4	200	220	264	55D26R	N50Z	350	440	525
26A19L	12N24-3	200	220	264	55D26L	N50ZL	350	440	525
28A19R	NT50-N24	250			60D23R		520		
28A19L	NT50-N24L	250			60D23L		520		
32A19R	NX60-N24	270	295		65D23R		420	540	580
32A19L	NX60-N24L	270	295		65D23L		420	540	580
26B17R		200			65D26R	NS70	415	520	625
26B17L		200			65D26L	NS70L	415	520	625
28B17R		245			65D31R	N70	390	520	630
28B17L		245			65D31L	N70L	390	520	630

JIS Specification Conversion Tables Continued

Specification		CCA			Specification		CCA		
JIS (New)	JIS (Old)		MF	CMF	JIS (New)	JIS (Old)		MF	CMF
28B19R	NS40S	245			70D23R	35-60	490	540	580
28B19L	NS40LS	245			70D23L	25-60	490	540	580
32B20R	NS40	270			75D23R		500	520	580
32B20L	NS40LS	270			75D23L		500	520	580
32C24R	N40	240	325	400	75D26R	F100-5	490		
32C24L	N40L	240	325	400	75D26L	F100-5L	490		
34B17R		280			75D31R	N70Z	450	540	735
34B17L		280			75D31L	N70ZL	450	540	735
34B19R	NS40ZA	270	325	400	80D23R		580		
34B19L	NS40ZAL	270	325	400	80D26L		580		
36B20R	NS40Z	275	300	360	85B60K				500
36B20L	NS40ZL	275	300	360	85BR60K				500
36B20RS	NS40ZS	275	300	360	95D31R	NX120-7	620	660	850
36B20LS	NS40ZLS	275	300	360	95D31L	NX120-7L	620	660	850
38B20R	NX60-N24	330	340	410	95E41R	N100	515	640	770
38B20RS	NT60-N24S	330	340	410	95E41L	N100L	515	640	770
38B20L	NX60-24L	330	340	410	105E41R	N100Z	580	720	880
38B20LS	NX60-24LS	330	340	410	105E41L	N100ZL	580	720	880
40B20L		330			105F51R	N100Z	580		
40B20R		330			105F51L	N100ZL	580		
42B20R		330			115E41R	NS120	650	800	960
42B20L		330			115E41L	NS120L	650	800	960
40B20RS		330			115F51R	N120	650	800	960
40B20LS		330			115F51L	N120L	650	800	960
46B24R	NS60	325	360	420	130E41R	NX200-10	800		

JIS Specification Conversion Tables Continued

Specification		CCA			Specification		CCA		
JIS (New)	JIS (Old)		MF	CMF	JIS (New)	JIS (Old)		MF	CMF
46B24L	NS60L	325	360	420	130E41L	NX200-10L	800		
46B24RS	NS60S	325	360	420	130F51R			800	
46B24LS	NS60LS	325	360	420	130F51L			800	
46B26R		360			145F51R	NS150	780	920	
46B26L		360			145F51L	NS150L	780	920	
46B26RS		360			145G51R	N150	780	900	1100
34B19RS	NS40ZAS	270	325	400	80D26R	NX-110-5	580	280	630
34B19LS	NS40ZALS	270	325	400	80D26L	NX110-5L	580	280	630
46B26LS		360			145G51L	N150L	780	900	1100
48D26R	N50	280	360	420	150F51R	NT200-12	640		
48D26L	N50L	280	360	420	150F51L	NT200-12L	640		
50D20R		310	380	480	165G51R	NS200	935	980	
50D20L		310	380	480	165G51L	NS200L	935	980	
50D23R	85BR60K	500			170F51R	NX250-12	1045		
50D23L	85B60K	500			170F51L	NX250-12L	1045		
50B24R	NT80-S6	390			180G51R	NT250-15	1090		
50B24L	NT80-S6L	390			180G51L	NT250-15L	1090		
50D26R	50D20R		370		195G51R	NX300-51	1145		
50D26L	50D20L		370		195G51L	NX300-51L	1145		
55D26R		355	480	500	190H52R	N200	925	1100	1300
55D23L		355	480	500	190H52L	N200L	925	1100	1300
55B24R	NX100-S6	435	420	500	245H52R	NX400-20	1530	1250	
55B24L	NX100-S6L	435	420	500	245H52L	NX400-20L	1530	1250	



FEATURES

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English, French, German, Russian, Spanish, Dutch

Package



SPECIFICATIONS

Power supply	Powered by the battery been tested	Working temperature	0°C ~ +40°C
Voltage range	9-18V(DC)	Shell material	ABS Plastic
Display	image and dot matrix LCD screen	Dimension	225mmX105mmX35mm
Contact choice	double conductor kelvin clip	Test accuracy for internal resistance	0-200mΩ

FUNCTION CHART

