

Need 1978 W116 Euro 280S Ignition Timing Info

Post by "taha.nazari" of Apr 5th 2022, 10:32 pm

Hi,

I have a 1978 W116 280S euro version. It came with the transistorized ignition system and two ballast resistors (0.4 & 0.6) from the factory. Distributor number is 0237302004 and the engine is M110.922. I'm looking for the ignition timing info for this specific model. I searched a lot and the only information I found so far was for the US models. Any help would be appreciated. Thank you.

Post by "Gerd.Batke" of Apr 6th 2022, 9:30 pm

Hi,

- The dwell angle for a transistorized M110 engine with blue Bosch coil and two resistors should be 34°-40° (when checked with used points in idle; adjust to 34° once new breaker contacts have been installed).

- Ignition Timing:

- Adjust to **28° @ 4500rpm with the vacuum lines being *disconnected*** (i.e. without vacuum correction) from the distributor.

- Check distributor's timing adjustment (with vacuum lines disconnected):

@ 1500rpm: 13...21°

@ 3000rpm: 27...31°

@ starter speed: 5° before TDC

- Check distributor's timing adjustment (with vacuum lines connected):

@ idle: TDC +/-4°

- Check vacuum correction (with vacuum lines connected of course)

@ idle: 4...6° in direction late

@ 4500rpm: 8...12° in direction early (i.e. in sum 36...40° before TDC)

Regards,

Gerd

PS: In case you've got access to the Flipbooks section, you may find the data (in German) here <https://vdhflipbooks.de/books/...lenbuch-PKW-1980/#264-265> .

Post by “taha.nazari” of Apr 6th 2022, 11:06 pm

Hi Gerd.

Thanks a lot for your kind attention to my request. Unfortunately I don't have access to the Flipbooks. I'm looking to buy the workshop manual for my car. So far I bought two manuals from two different sources (mbmanuals & ServiceManualsOnline) and none had the information I needed for my car. All those books only have the information for US W116 models. Is there any sources I could buy the manual (even in German) you mentioned above on the Internet? Does that book contains the wiring diagrams as well? Again I appreciate your help in advance.

Thank you,

Taha

Post by “Gerd.Batke” of Apr 7th 2022, 8:19 am

Hi Taha,

Regarding data concerning any kind of engine/gearbox/chassis/... adjustments & checks the so-called "Tabellenbuch" ("Technical Data" Book) would be fine, too - there's no need for the full workshop manual.

Unfortunately the "Tabellenbuch 1980" (providing data for the W116 series, too) isn't offered any longer by Mercedes-Benz (<https://www.mercedes-benz-clas...atur/tabellenbuecher/?p=2>). Nonetheless the VdH still seems to be offering this one to its members (<https://www.mercedes-benz-clas...atur/tabellenbuecher/?p=2>).

But in case you just need to look up some data every now and then and don't need to have the printed book at hand in your workshop, it might be as good to check the Flipbook version.... Just apply for access as described here [ZUGANG ZU DEN FLIPBOOKS BEANTRAGEN LEICHT GEMACHT](#) (in German...).

Getting Flipbook access should even be feasible without having a VdH membership.

Btw: The schematics aren't part of the "Tabellenbuch".

All I know, there are

- dedicated workshop manuals dealing with troubleshooting the W116 electrical system (having a late M110, you should check the appropriate manual; the early W116 schematics - even the carburetor ones - aren't fully identical to the late ones as far as I know!?),
- schematics for the W116.

I guess you should be able to find the schematics required in the Flipbooks section, too. (<https://mercedesclubs.de/suchf...ase=all&limit=20&start=40>, <https://mercedesclubs.de/suchf...searchphrase=all&limit=20>)

Regards,

Gerd

Post by "RoterBaron" of Apr 7th 2022, 8:38 am

[Quote from Gerd.Batke](#)

- The dwell angle for a transistorized M110 engine with blue Bosch coil and two resistors should be 34°-40° (when checked with used points in idle; adjust to 34° once new breaker contacts have been installed).

Hi Gerd,

is the dwell angle for transistorized (i guess still breaker triggered) different than plain old breakers ignition?

Thanks
Michael

Post by "Gerd.Batke" of Apr 7th 2022, 11:59 am

Hi Michael,

Indeed.

The Databook 1973 e.g. recommends

- adjusting the dwell angle to **42°** (39...42° when checking used contacts) for the standard, non-transistorized M110 ignition with breaker contacts, while it should be
- adjusted to **34°** (34...40° when checking used contacts) with the transistorized ignition system.

I guess a smaller dwell angle with the transistorized solution can do the job, as the primary / the charging current for the coil can be higher with the transistor switching it - as a result the energy required for generating the spark can be "pumped" into the coil in a shorter period of time.

Regards,

Gerd

Post by “Obelix” of Apr 7th 2022, 12:12 pm

...es gibt beim 280 S mit Transistorzündung keinen Unterbrecher mehr, ergo ist der Schließwinkel auch nicht einstellbar !!

...there are no points on the 280 S with transistor ignition, so the dwell angle is also not adjustable !!!

Post by “RoterBaron” of Apr 7th 2022, 12:12 pm

[Quote from Gerd.Batke](#)

the charging current for the coil can be higher with the transistor switching it

hm?

I thought something like that, but was trying to find out where the higher charging current should come from.

So sorry for asking for more details. If I am capturing this thread too much - please let me know Taha.

In case of the M110 transistorized solution: Is the serial resistor removed from the coil or where does the higher charging current comes from?

Thank's
Michael

Post by “RoterBaron” of Apr 7th 2022, 12:36 pm

Ok - I see - I am contacting Gerd directly - my question makes no sense in this thread context here.

Thanks and sorry

Post by “Gerd.Batke” of Apr 7th 2022, 6:05 pm

Hi Christian,

are there no breaker contacts on **all** 280S W116? - Or just on the late ones having the 0237302004 distributor Taha mentioned?

Checking the Databook 1973, it seems there's been a different distributor (0 231 309 001) on the early 280S / 110.922 engines - with breaker points?

Regards,

Gerd

Post by “taha.nazari” of Apr 7th 2022, 8:42 pm

[Quote from RoterBaron](#)

hm?

I thought something like that, but was trying to find out where the higher charging current should come from.

So sorry for asking for more details. If I am capturing this thread too much - please let me know Taha.

In case of the M110 transistorized solution: Is the serial resistor removed from the coil or where does the higher charging current comes from?

Thank's
Michael

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Just enjoying the conversations. Thanks for your contribution.

Post by “taha.nazari” of Apr 7th 2022, 9:15 pm

[Quote from Obelix](#)

...es gibt beim 280 S mit Transistorzündung keinen Unterbrecher mehr, ergo ist der Schließwinkel auch nicht einstellbar !!

...there are no points on the 280 S with transistor ignition, so the dwell angle is also not adjustable !!!

Hi,

You're right. TIS is not adjustable but having the correct range of dwell angle helps to identify the faulty unit which happened to me before.

Regards,

Taha

Post by “Obelix” of Apr 7th 2022, 9:45 pm

...280 S W 116 up to 1978 has a standard coil ignition !