

New Yuasa garden batteries @ input & output

Tuesday	Wednesday	Thursday	Friday	Friday
3A max 20 / 79 10.07 11.5 102.5	3A max 20 / 70 20.59 22.04 64	3A max 20 / 79 17.32 18.23 51	3A max 20 / 93 8.46 9.39 52.75	3A max 20 / 80 19.15 20.07 51.5
C210803 2021-08-10 21 / 22mm 8 CG 8 N/A	C210804 2021-08-11 21 / 22mm 8 CG 8 N/A	C210805 2021-08-12 21 / 22mm 8 CG 8 N/A	C210806 2021-08-13 21 / 22mm 8 CG 8 N/A	C210807 2021-08-13 21 / 22mm 8 CG 8 N/A
S1 (FLA 30Ah) 12.85 / 13.13* S2 + S3 (FLA 60Ah) 12.94 / 12.74*	S1 (FLA 30Ah) 12.88 / ?? S2 + S3 (FLA 60Ah) 12.90 / ??	S1 (FLA 30Ah) 12.86 / 13.11* S2 + S3 (FLA 60Ah) 13.01 / 12.88*	S1 (FLA 30Ah) 12.85 / ?? S2 + S3 (FLA 60Ah) 13.00 / ??	S1 (FLA 30Ah) 12.84 / ?? S2 + S3 (FLA 60Ah) 13.02 / ??
12.7 12.52 1.85 1.58 218 / 257	12.67 12.56 1.81 1.59 223 / 257	12.75 12.67 1.9 1.62 218 / 256	12.74 12.63 1.9 1.6 218 / 254	12.75 12.63 1.96 1.61 217 / 255
102.5 2.93 0.34	64 1.81 0.55	51 1.50 0.67	52.75 1.54 0.65	51.5 1.53 0.65
57.9 1.715 1.71	57.9 1.7 1.07	57.9 1.76 0.85	57.9 1.75 0.88	57.9 1.785 0.87

First cycles with new garden mower batteries. 2x 30Ah paralleled @ input, 1x 30Ah @ output

1st cycle. Output battery S1 charged previous day with TGX charger to 14.69V (done @9.33). Discharged that evening@1.5Ah (C20) (done @ 20.44). Output battery S1 will be charged to 15V in this cycle. So expected is that the COP will be a bit lower in this cycle. Charged input batteries during discharge of output batteries (so 1h). *measured after 1h

Discharged output battery previous night@1A. Charged input batteries previous night. Charged output battery to 15V. Charged input batteries during discharge of output batteries (so 1h).

Discharged output battery in the morning@1A. Charged input batteries in the morning. Charged output battery to 15V. Charged input batteries during discharge of output batteries (so 1h). *Measured after an hour

Discharged output battery previous night@1A. Charged input batteries previous night. Charged output battery to 15V. Charged input batteries during discharge of output batteries (so 1h).

Discharged output battery in the morning (1h after previous cycle) night@1A. Charged input batteries in the morning (1h after previous cycle). Charged output battery to 15V. Charged input batteries during discharge of output batteries (so 1h).

Conclusions: Although cycles C21083 can't really be counted as representative cycle, it seems that in cycle C210804 S1 still was conditioning. In final COP with this setup shows in C210805/C210806/C210807

0-15Amp meter & on all cycle, no switch

Saturday
15A max 77 / 20 9.11 10.03 52
C210808 2021-08-14 21 / 22mm 8 CG 8 N/A
S1 (FLA 30Ah) 12.84 / 13.10* S2 + S3 (FLA 60Ah) 13.01 / 12.86*
12.73 12.62 2 1.75 217 / 254
52 1.63 0.62
57.9 1.875 0.87

Discharged output battery previous night@1A. Charged input batteries previous night. Charged output battery to 15V. Switched 0-3A meter for 0-15amp meter. Tis amp meter cannot be bypassed, so the whole cycle it was active. Charged input batteries during discharge of output batteries (so 1h). *Measured after an hour

Conclusions: Different amp meter and leaving it on for the whole cycle gave more or less the same COP. If there was any influence from leaving the amp meter on, it was very minor. Since the amp meter has a bigger scale, reading amp values was less accurate.

Back to 0-3Amp meter & positioned in negative wire

Monday
3A max 21 / 84 9.29 10.27 57
C210809 2021-08-16 21 / 22mm 8 CG 8 N/A
S1 (FLA 30Ah) 12.83 / 13.10* S2 + S3 (FLA 60Ah) 12.95 / 12.83*
12.67 12.6 1.92 1.59 221 / 255
57 1.67 0.60
57.9 1.755 0.95

Discharged output batteries aturday morning @1A. Charged input batteries Saturday morning. Charged output battery to 15V. Switched back to 0-3A meter, but located in the negative wire instead of the positive. *Measured after an hour

Day	-
Amp meter	-
Temp / Humidity	C / %
Started @	hour.min
Stopped @	hour.min
Stopwatch	min
Cycle	-
Date	-
Rotor magnets, amount/width	-/mm
Gap	mm
Mode	-
Power coils	-
Flywheel weight	kg
Output battery	ID-type
Output voltage @ rest, before/after testing	V
Input battery	ID-type
Input voltage @ rest, before/after testing	V
Input voltage @ start running	V
Input voltage @ end running	V
Amp @ start	A
Amp @ end	A
RPM @ start/end	rpm
Time to charge to 15.3V	min
Ah to charge to 15.3V	Ah
COP	-
Variable resistance	Ohm
Average amperage	A
Time factor	-
Correction factor	-
"...@ start" = after +/- 2min of running.	
"...@ end" = when output batt. Is 15.3V	
"...@ rest after testing" = 1 hour after run has finished	