



SERVICE BULLETIN

1400 73RD AVENUE N. E. • MINNEAPOLIS, MINN 55432

Misc

9

2-73

ONAN MODEL NUMBERING SYSTEM

If you wish to contact Onan, your Onan dealer or distributor about parts or service, always furnish the complete model number, specification letter and serial number from the nameplate. When using the service bulletin for information about your unit's model designation, be sure to use the correct system below (either for current or early models).

Read down the column groups which appear on the following pages.

CURRENT MODELS

MODEL - 6.5 MCCK-3 R / 3596 C

SEE COLUMN - 1 2 3 4 5 6 7

EARLY MODELS

MODEL - 1 AJ-2 R V * / 926 A

SEE COLUMN - 1 2 3 4 8 5 6 7

A NUMBER HERE INDICATES A STANDARD MODEL MODIFIED BY ONAN FOR A SPECIAL APPLICATION. A FEW COMMONLY USED NUMBERS ARE LISTED.

STANDARD MODIFICATIONS

CODE	DESIGNATION	CODE	DESIGNATION
1	6 volt cranking or input.	31	State of Pa. - gas.
2	12 volt cranking or input.	50	State of Pa. - diesel.
3	24 volt cranking or input.	114	Fire dept. models (manual start).
4	32 volt cranking or input.	131	State of Pa. - LPG.
5	125 volt cranking or input.	1330	Utility truck model.
8	Unhoused model.	2236	Contractor model.
10	36 volt cranking or input.	2268	Heat exchanger model.
11	48 volt cranking or input.	3500	PortaStart, with 18 volt battery.
16	Hand throttle (no governor).	3836	Marine work boat model.
17	X - ray model.	3900	PortaStart.
28	Variable speed governor.	4114	Fire dept. models (electric start).
30	State of Pa. - gasoline.	6000	Mobile models.

1. GENERATING SET CAPACITY
(IN WATTS)

0.6, 06 = 600
 1.0, 1 = 1000
 1.5, 105 = 1500
 10.0, 10 = 10,000
 450.0, 450 = 450,000
 etc.

2. ENGINE DATA

MARINE MODELS ONLY

SERIES	CYLINDER	BORE (IN)	STROKE (IN)	COOLING	ENGINE MANUFACTURER
MKH	1	2 1/2	2 1/4	Liquid	Onan
MAJ	1	2 3/4	2 1/2	Liquid	Onan
MUK	1	3	2 3/4	Liquid	Onan
MJA	1	3 1/4	3 5/8	Liquid	Onan
MCK	2	3	2 3/4	Air	Onan
MTK	2	3	2 3/4	Liquid	Onan
MCCK	2	3 1/4	3	Liquid	Onan
MJB	2	3 1/4	3 5/8	Liquid	Onan
MGO	4	2 7/8	3 1/2	Liquid	Continental Y91
MJC	4	3 1/4	3 5/8	Liquid	Onan
DIESEL ONLY					
MDJA	1	3 1/4	3 5/8	Liquid	Onan
MDSL, MDSP	1	3 1/2	3 1/2	Liquid	Onan
MDJB	2	3 1/4	3 5/8	Liquid	Onan
MDJE	2	3 1/2	3 5/8	Liquid	Onan
MDZB	3	3 3/4	4 1/2	Liquid	Hercules DD-149
MDJC	4	3 1/4	3 5/8	Liquid	Onan
MDJF	4	3 1/2	3 5/8	Liquid	Onan
MDE H	4	4.22	4.52	Liquid	Ford 2711E
MDEG	6	4.22	4.52	Liquid	Ford 2714E

GENERATING SETS WITH ONAN ENGINES

SERIES	CYLINDER	BORE (IN)	STROKE (IN)	COOLING
AH	1	2 1/2	2 1/4	Air
AK	1	2 1/2	2 1/2	Air
AJ	1	2 3/4	2 1/2	Air
LK	1	3 1/4	3	Air
JA	1	3 1/4	3 5/8	Air
NB	1	3 9/16	3	Air
BH	2	2 1/2	2 1/4	Air
ACK	2	3	2 3/4	Air
CK	2	3	2 3/4	Air
CCK, CCKB	2	3 1/4	3	Air
NH	2	3 9/16	3	Air
CW	2	4	3 1/2	Air
JB	2	3 1/4	3 5/8	Air
JC	4	3 1/4	3 5/8	Air
RJC	4	3 1/4	3 5/8	Liquid
DIESEL ONLY				
DJA	1	3 1/4	3 5/8	Air
DSL, DSP	1	3 1/2	3 1/2	Air
DJB	2	3 1/4	3 5/8	Air
DRN, DRP	2	3 1/2	3 1/2	Air
DJC	4	3 1/4	3 5/8	Air
RDJC	4	3 1/4	3 5/8	Liquid
RDJF	4	3 1/2	3 5/8	Liquid

GENERATING SETS WITH OTHER MANUFACTURER'S ENGINES

SERIES	CYLINDER	BORE (IN)	STROKE (IN)	COOLING	ENGINE MANUFACTURER
TL	1	2 5/16	1 27/32	Air	Tecumseh-LAV30
TA	1	2 1/2	1 27/32	Air	Tecumseh-Lauson H 35
PC	1	2 1/2	2 1/8	Air	Briggs & Stratton
TE	1	2 5/8	2 1/4	Air	Tecumseh-Lauson H 50
TF	1	2 3/4	2 17/32	Air	Tecumseh-Lauson H 70
TD	1	3 5/16	2 3/4	Air	Tecumseh-Lauson HH 80
GO	4	2 7/8	3 1/2	Liquid	Continental Y 91
EL	4	3 3/16	3 3/4	Liquid	Ford 8 NNN
HC	4	3 7/16	4 3/8	Liquid	Continental F-162
HQ	4	3 7/16	4 3/8	Liquid	Continental F-162
HK	6	3	4 3/8	Liquid	Continental F-186
HN	6	3 5/16	4 3/8	Liquid	Continental F-226
EC	6	3.62	3.6	Liquid	Ford 223 CU IN
EK	6	4	3.18	Liquid	Ford 240 CU IN
EM	6	4	3.98	Liquid	Ford 300 CU IN
JT	6	4	4 3/8	Liquid	Continental M330
KA	6	4 3/8	5	Liquid	IHC, U-450
KT	6	5 3/8	6	Liquid	IHC, UT-817
WA	6	5 3/8	6	Liquid	Waukesha 145-GZU
WB	6	6 1/4	6 1/2	Liquid	Waukesha F1197GU
WC	6	6 1/4	6 1/2	Liquid	Waukesha F1197GRS1
ED	8	3.62	3.3	Liquid	Ford 272 CU IN
EF	8	3.75	3.3	Liquid	Ford 292 CU IN
KB	8	4 1/8	3 3/4	Liquid	IHC, UV-401
KR	8	4 1/2	4 5/16	Liquid	IHC, UV-549
WE	8	5 3/4	4 7/8	Liquid	Roiline H884
FT	12	5 1/2	6	Liquid	Cummins GV12-525
WF	12	5 3/4	5 3/16	Liquid	Waukesha L1616GSIU
WK	12	5 3/4	5 3/16	Liquid	Waukesha L1616GSIU
DIESEL ONLY					
DLA	1	3	3 1/2	Air	Lister LR1Z
DZB	3	3 3/4	4 1/2	Liquid	Hercules D1500
DEC	4	3.937	4.526	Liquid	Ford 220 CU IN
DZC	4	4	4 1/2	Liquid	Hercules D2300
DEH	4	4.22	4.52	Liquid	Ford 2711E
DFA	4	5 1/8	6	Liquid	Cummins HRC-4
DFJ	4	5 1/8	6	Liquid	Cummins NHC-4
DFK	4	5 1/2	6	Liquid	Cummins NT-380
DYA	6	3 7/8	4 1/4	Liquid	Allis Chalmers 2900
DEF	6	4.125	4.52	Liquid	Ford 2713E
DZD	6	4	4 1/2	Liquid	Hercules D3400
DEG	6	4.22	4.52	Liquid	Ford 2714E
DWJ	6	4 1/4	5	Liquid	Waukesha 135DKU
DYC	6	4 1/4	5	Liquid	Allis Chalmers 3500
DYD	6	4 7/16	5 9/16	Liquid	Allis Chalmers 11000
DFB	6	4 7/8	6	Liquid	Cummins H-743-PG160
DFC	6	5 1/8	6	Liquid	Cummins H-743-P190
DFD	6	5 1/8	6	Liquid	Cummins HRS-6
DFE	6	5 1/8	6	Liquid	Cummins NHRS-6
DFH	6	5 1/8	6	Liquid	Cummins N-743-P220
DYH	6	5 1/4	6 1/2	Liquid	Allis Chalmers 21000
DFM	6	5 1/2	6	Liquid	Cummins NTA-400
DFP	6	5 1/2	6	Liquid	Cummins NT-335
DFQ	6	5 1/2	6	Liquid	Cummins NT-855-P270
DYB	6	5 1/4	6 1/2	Liquid	Allis Chalmers 25000
DYG	6	5 1/4	6 1/2	Liquid	Allis Chalmers 17000 MKII
DWF	6	6 1/4	6 1/2	Liquid	Waukesha F1197DSU
DFT	12	5 1/2	6	Liquid	Cummins V-1710-P500
DFU	12	5 1/2	6	Liquid	Cummins VT-1710-P635
DFV	12	5 1/2	6	Liquid	Cummins VT-1710-PG635
DFW	12	5 1/2	6	Liquid	Cummins VTA-1710-P800
DFY	12	5 1/2	6	Liquid	Cummins VTA-1710-P800

3. ELECTRICAL OUTPUT

AC VOLTAGE

Code	Volts	Phase	Wire
1	120	1	2
1X (was 11)	120	3	3
2	240	1	2
2X (was 12)	120/208; 240/416; 120; 120/240D; 220/380	3	12
3	120/240	1	3
*3C	120; 240; 120/240	1	4
3X (was 10)	240/480	1	3
*3U	120/240	1	3
4	120/208	3	4
4X	277/480	3	4
5	240	3	3
*5D	120/240	3	4
5X	240/480D; 240D; 480; 240/416	3	12
6	480	3	3
*6D	240/480	3	4
6X	277/480; 138/240; 240/416	3	12
7	220/380	3	4
7X	240/416	3	4
8	127/220	3	4
8X	120/208; 120; 120/240	1 & 3	6
9	600	3	3
9X	347/600	3	4
99	Special Voltage	1 &/or 3	
14	120/208; 240/416	3	10
15	120/208; 240/416; 277/480 120/240D & 120/240 Single Phase	1 & 3	12
16	139/240; 277/480	3	10

Other Frequencies

Prefix the voltage code with a 2 on 50/60 hertz
 Prefix the voltage code with a 5 on 50 hertz
 Prefix the voltage code with a 18 on 180 hertz
 Prefix the voltage code with a 40 on 400 hertz
 Prefix the voltage code with a 80 on 800 hertz

The prefix applies to generators, units, automatic transfer switches, automatics and switchboards.

Example: 5.0CCK-3CR for 50 hertz becomes 3.5CCK-53CR

*C designates reconnectible.

*D designates delta.

*U designates unity power factor.

DC BATTERY CHARGING

206 = 6-8 volts
 212 = 12-15 volts
 224 = 24-28 volts
 225 = 12/24 dual voltage
 226 = 6/12/24 volts (regulated)
 228 = 28.5 volts (regulated)
 232 = 32-40 volts
 210 = 110-140 volts

DC NON-BATTERY CHARGING

114 = 14 volts
 115 = 115 volts
 125 = 125 volts
 123 = 230 volts
 128 = 28 volts
 136 = 36 volts
 144 = 440 volts
 150 = 250 volts

4. TYPE OF STARTING

E - ELECTRIC START - Start-stop buttons on generating set only.

M - MANUAL START - Pull rope or hand crank.

R - REMOTE START - Start-stop buttons at generating set and remote control.

A - AUTOMATIC START - Automatically started with a load demand of 75 watts or more (installed only on remote starting generating sets).

P - PORTABLE MODELS - Same as manual start model except for portable service with a carrying handle.

5. DIAGONAL LINE

Separate unit characteristics from specification number and letter.

6. SPECIFICATION NUMBER

Denotes customer requested deviations from standard model.

7. SPECIFICATION LETTER

Denotes major Onan changes in unit series at factory.

8. DESIGN FEATURE CODE

V - Designates Vacu-Flo cooling (optional).

L - Designates Idlematic control feature.

WELDERS

330 = 30 volt DC
 331 = 30 volt DC, 120 volt AC
 *332 = 20-30 volt, DC, 240 volt AC (CCK)
 341 = 25 volt AC, 120 volt AC
 343 = 25 volt AC, 120/240 volt AC
 381 = 28 volt DC (regulated), 120 volt AC

* Early CK-332 welders were only 20 to 30 volt DC, no AC circuit.

TYPICAL MODELS ONLY

INDUSTRIAL ENGINES: $\frac{CCK}{9} - \frac{MS}{10} \frac{88}{5} \frac{F}{6} \frac{7}{7}$

INVERTERS: $\frac{1}{1} \frac{VA}{12} \frac{A}{15} \frac{1}{3} - \frac{3}{*} \frac{1}{5} \frac{A}{6} \frac{7}{7}$

MOTOR-GENERATOR SETS: $\frac{2}{1} \frac{MA}{11} - \frac{350}{3} \frac{N}{11} \frac{14}{5} \frac{A}{6} \frac{7}{7}$

TWO BEARING GENERATORS: $\frac{15.0}{1} \frac{UF}{11} - \frac{3S}{3} \frac{106}{5} \frac{14}{14}$

AUTOMATIC CONTROLS: $\frac{15.0}{1} \frac{HA}{12} \frac{3}{3} \frac{4}{*} \frac{1}{5} \frac{C}{6} \frac{7}{7}$

SINGLE BEARING GENERATORS: $\frac{35}{1} \frac{UL}{11} - \frac{4}{3} \frac{N}{11} \frac{1}{5} \frac{A}{6} \frac{7}{7}$

AUTOMATIC TRANSFER SWITCH: $\frac{LTCU}{12} \frac{400}{13} - \frac{5}{3} \frac{1}{5} \frac{C}{6} \frac{7}{7}$

SWITCHBOARDS: $\frac{200.0}{13} \frac{SPF}{12} - \frac{4}{3} \frac{1}{5} \frac{A}{6} \frac{7}{7}$

NOTE: For columns 1 through 8, refer to preceding descriptions.

* Page 1.

9. ONAN INDUSTRIAL ENGINE DATA (Air Cooled)				10. POWER TAKE-OFF		11. MISCELLANEOUS	
SERIES	CYLINDER	BORE (In)	STROKE (In)	CODE	DESIGNATION	CODE	DESIGNATION
ACK	2	3	2 3/4	F	Clutch drive	A	AC (MG set)
AJ	1	2 3/4	2 1/2	G	Gear reduction drive	C	Cranking winding
AK	1	2 1/2	2 1/2		(2G -2:1, 4G -4:1)	D	DC - Electric motor
BH	2	2 1/2	2 1/4	M	Starter	MA } Motor generator	
BF	2	3 1/2	2 5/8	MF	Starter & clutch drive	MG } Designation	
CCK	2	3 1/4	3	MG	Starter & gear reduc-	N	Non-cranking
CCKA	2	3 1/4	3		tion drive (2MG -2:1,	U	Separate gen. (all voltages
CCKB	2	3 1/4	3		4MG -4:1)	RA	Tractor drive separate
CCKM	2	3 1/4	3	MS	Starter & stub shaft	UA	generator (rev. arm, below 8KW)
CK	2	3	2 3/4	MT	Starter w/transmission	UB	Separate generator (rev. arm, 8KW & up)
CW	2	4	3 1/2	S	(4MT -3.9:1)	UD	Separate generator (rev. arm, below 4 KW)
DRP	2	3 1/2	3 1/2	T	Stub shaft power take-	UF	Sep. gen. (rev. arm)
JA	1	3 1/4	3 5/8		off	UL	Single bearing generator (rev. field)
JB	2	3 1/4	3 5/8		Transmission drive	UR	Tractor PTO driven, brushless
JC	4	3 1/4	3 5/8		(clutch & gear trans-	US	6 Pole sep. gen. (rev. field), all volt begin 10 KW
DJA	1	3 1/4	3 5/8		mission) 2T -2:1 or	UT	Tractor drive separate generator
DJB	2	3 1/4	3 5/8		2.5:1, 4T -4:1	S	Two bearing, non-cranking
DJC	4	3 1/4	3 5/8				
LKB	1	3 1/4	3				
NB	1	3 9/16	3				
NH	2	3 9/16	3				
NHA	2	3 9/16	3				
NHB	2	3 9/16	3				
NHC	2	3 9/16	3				

12. AUXILIARY CONTROLS				13. AMPERE RATING		14. TYPE OF DRIVE	
CODE	DESIGNATION	CODE	DESIGNATION	CODE	DESIGNATION	CODE	DESIGNATION
T	Automatic transfer switch	S	Switchboards	10	10 Amp	41	4.12 - 1 gear
AF		SA		30	30 Amp	42	Belt
ATSC		SB		60	60 Amp	61	3.32 - 1 gear
ATSD		SC		100	100 Amp	74	1.83 - 1 gear
ATSE		SPF		200	200 Amp	104	6.9 - 1 gear
LT		SPW	300	300 Amp	106	3.32 - 1 gear	
LTA		SNF	400	400 Amp			
LTB		SNW	600	600 Amp			
LTCU			800	800 Amp			
LTDU			1200	1200 Amp			
LTEU			2000	2000 Amp			
LTF			3000	3000 Amp			
LTG			4000	4000 Amp			
LTM							
LTP							
LTPA							
LTSU							

15. TYPE OF MOUNT	
CODE	DESIGNATION
A	Rack
B	Wall
C	Free standing on floor.

CODE	DESIGNATION
H	Automatic control
HA	



SERVICE BULLETIN

DIVISION OF ONAN CORPORATION
MINNEAPOLIS, MINNESOTA 55432

Misc.

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Exercise Your Generating Set!!!

2-73

RECOMMENDATIONS

The Onan warranty for your standby generating set requires regular exercising of the equipment. This exercising should be performed once each week for not less than 30 minutes at a time. Exercising under full load, if possible, produces the following benefits:

1. Lubrication of internal parts
2. Removal of moisture
3. Assurance of proper starting and operation when needed
4. Refilling of carburetor with fresh fuel (gasoline sets)
5. Opportunity to check performance
6. Bringing engine up to operating temperature
7. Battery recharging

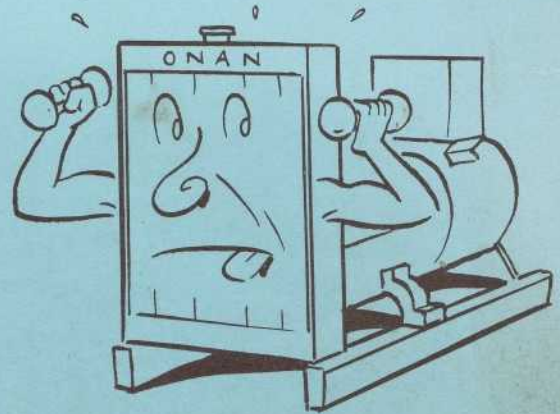
EXERCISING MAINTENANCE

Proper maintenance procedures are necessary for effective exercising and standby operation.

Installation Provisions: The original installation instructions required a location in a dry, clean, ventilated and dirt free room (warm if possible). Adequate space for service, repair, and cleanup was also required. These conditions are to be restored if necessary and then maintained.

Fuel Storage: Check that the fuel supply is not only adequate for exercising but also for use during emergencies. Fuel consumption curves and tank information are available from your Onan dealer.

Batteries: Make sure the batteries are connected to the correct terminals and are of recommended size for the unit (voltage/ampere hours). To prevent difficult starting, brighten the contacting surfaces of the battery cable connections.



Coat the contact surfaces with mineral grease before the terminals are reconnected and then connect tightly. Exercise your set long enough to bring the battery up to full charge. Mount the battery on a wooden platform near but not under the unit. Battery care information can be found in the Onan Service Bulletin Misc 2.

Remote Starting: Where remote starting must be practiced, an automatic Onan exerciser clock can start and stop the unit as desired. This automatic exercising system can be modified to include transfer to load during exercise, if desired.

Record Keeping: To provide proper maintenance of the unit, records should be kept and a definite schedule followed. This is facilitated by using Onan Service Log Charts - available at no charge from Onan. Request the appropriate chart from the following list and keep a current copy mounted on the wall near the standby set.

1. Form 900-97: Gas-Gasoline Service Log Chart
2. Form 900-98: Diesel Service Log Chart
3. Form 23D016: Initial Installation Check Sheet and Sales-Service Record Chart