Generator Drive Diesel Engines

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Want to learn more about John Deere generator drive engines?

Visit JohnDeere.com/JDPower.

Generator drive engines

John Deere generator drive engines are built to perform in extreme conditions with reliable operation, low maintenance, long engine life, and exceptional fluid economy. They give you the power to meet any challenge.

Prime or standby power

John Deere generator drive engines are ready when and where you need them. They provide fast response for standby situations and exceptional load recovery in a wide variety of applications.

A smart choice

With John Deere, you get a wide range of configurations and accessories so you can specify the right engine that best fits your application. Our preconfigured options and innovative technologies can help save hours of engineering time and help you get machines to market faster.

Extensive integration network

You get expert integration assistance provided by John Deere engineers and distributors. OEMs can put our application engineering experience and know-how to work to help save development time and money.

Unparalleled customer support

With more than 9,000 John Deere service locations worldwide, you never have far to go to find expert assistance and advice. We support you not just at the beginning, but throughout the full lifetime of our products.

Ultimate uptime

Our distributors and dealers stock maintenance parts, as well as many other common replacement parts, to meet your service needs quickly. Our worldwide parts distribution system offers overnight delivery in most regions.

The John Deere difference

Proven performance

Off-highway experience

John Deere has billions of hours of field experience with off-highway engine technologies.

Load acceptance

Tailored turbocharging technology provides exceptional load acceptance and block loading capability.

Engines with cooled exhaust gas recirculation (EGR) deliver up to eight times better transient response than non-EGR engines. The potential energy transferred through EGR is immediately available to the turbo to generate boost.

John Deere engines meet ISO 8528-12 Class G3 international standards for most ratings.

Reliable uptime

Day-to-day reliability

John Deere engines feature top-liner cooling, efficient lubrication, and robust cooling systems for reliable operation.

Long-haul durability

John Deere engines are designed for rugged applications. Most models feature heavy-duty oversized components, steel pistons, and wet-type cylinder liners for long engine life.

Extreme conditions

Engines are built to operate in hot and dry, sub-zero, and humid climates as well as high altitudes. The engine control unit (ECU) monitors and protects engine components in extreme conditions. In regions where fuel quality may vary, John Deere protects the engine with two-stage fuel filtration and water detection.

The John Deere difference

Efficient operation

Fuel efficiency

The efficient design of the John Deere combustion chamber with high-ring pistons helps deliver excellent fuel economy.

Less DEF

Cooled EGR enables the use of a smaller selective catalytic reduction (SCR) system and lower diesel exhaust fluid (DEF) consumption compared to non-EGR John Deere engines. John Deere engines with EGR use 1% to 3% less DEF compared to non-EGR engines.

Low-idle capability

Reduces fluid consumption and decreases wear during transport or startup and shutdown checks.

Lifecycle costs

Reliable operation, low maintenance, long engine life, and exceptional fluid economy lead to low cost of operation with John Deere engines.

Easy integration

Preconfigured power units

Many John Deere engine packages come with mounting pads, cooling package, and air filter for ease of design and installation.

Dual frequency

Manufacturers that need 50 Hz and 60 Hz power can switch between 1500 and 1800 rpm without reprogramming.

Power density

John Deere engines are designed to deliver maximum power in a compact engine package. They are known for delivering exceptional kWm per liter of displacement.

Integration flexibility

With multiple parts options and various aftertreatment outlet and inlet choices, OEMs may have to do less modification to integrate John Deere engines. Easy configurability saves development costs and reduces delivery time to market.

Engines for EPA Final Tier 4 and EU Stage V applications

Dual frequency 60 Hz/50 Hz

Dual-frequency engines for worldwide use.
OEM customers currently using a John Deere Stage IV engine with a DPF won't have to re-engineer the machine design to meet the requirements of Stage V regulations.

Node	Engine name	Type	Engine model	Power unit model*	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.	RoHS†
kVA prime					rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW		
DOC and DPF aftertreatment															
30	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1800	36	38	31	33	35	28	90	1.8	■	■
					1500	36	38	31	33	35	28	90	1.8		
40	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1800	48	51	41	44	46	37	90	2.4	■	■
					1500	48	51	41	44	46	37	90	2.4		
55	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1800	55	59	47	50	53	43	90	2.8	■	■
					1500	55	59	47	50	53	43	90	2.8		
DOC, DPF, and SCR aftertreatment															
80	EWS 4.5L	4 cyl.	4045HG551	4045HP551	1800	86	94	75	78	85	68	92	4.3	■	■
					1500	83	91	73	76	82	66	92	4.2		
100	EWS 4.5L	4 cyl.	4045HG551	4045HP551	1800	106	116	93	96	105	84	92	5.3	■	■
					1500	103	113	90	94	102	81	92	5.2		
150	PVS 6.8L	6 cyl.	6068HG550	6068HP550	1800	180	199	159	164	180	144	93	9.0	■	■
					1500	165	182	146	150	165	132	93	8.3		
200	PSS 6.8L	6 cyl.	6068CG550	6068CP550	1800	216††	239	191	197	216	173	93	10.8	■	■
					1500	202	223	178	184	202	162	93	10.1		
275	PSS 9.0L	6 cyl.	6090CG550	6090CP550	1800	273	301	241	248	273	218	93	13.7	■	■
					1500	273	301	241	248	273	218	93	13.7		
300	PSS 9.0L	6 cyl.	6090CG550	6090CP550	1800	326	360	288	297	326	261	93	16.3	■	■
					1500	304	336	269	277	304	243	93	15.2		
500	JD14X	6 cyl.	6136CG550	—	1800	505	555	444	462	500	400	93	28.0	■	■
					1500	505	564	451	462	507	406	93	20.0		

* Power unit includes factory-mounted cooling package, air filter, and feet.
† The majority of John Deere Stage V engines comply with the European Union's Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU, as amended.
†† Rating at 241 kWm is also available.

The majority of John Deere Stage V engines are RoHS compliant for the Restriction of Hazardous Substances in the EU.

Engines for EPA Final Tier 4 applications

Dual frequency 60 Hz/50 Hz

Meeting emissions regulations without the need for a diesel particulate filter (DPF). These diesel oxidation catalyst/selective catalytic reduction (DOC/SCR) engines provide compact power and low installation costs.

Node	Engine name	Type	Engine model	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.
kVA (kWE) prime				rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW	
DOC and DPF aftertreatment													
55 (40)	EWX 4.5L	4 cyl.	4045TFG03	1800	55	57	46	50	52	41	90	3.9	-
DOC and SCR aftertreatment													
60 (50)	PWL 4.5L	4 cyl.	4045HFG04	1800	68	71	57	62	64	51	90	4.8	■
				1500	68	72	57	62	65	52	90	4.4	
75 (60)	PWL 4.5L	4 cyl.	4045HFG04	1800	80	84	67	73	76	60	90	5.6	■
				1500	80	84	67	73	76	61	90	5.1	
95 (75)	PWL 4.5L	4 cyl.	4045HFG04	1800	99	106	85	90	96	76	92	6.9	■
				1500	80	85	68	73	77	61	92	6.3	
125 (100)	PSL 4.5L	4 cyl.	4045CG440	1800	128	138	111	117	126	101	92	7.7	■
				1500	112	121	97	102	109	87	92	7.1	
155 (125)	PVL 6.8L	6 cyl.	6068HFG05	1800	160	174	139	146	158	126	92	9.0	■
				1500	160	175	140	146	158	127	92	8.2	
190 (150)	PVL 6.8L	6 cyl.	6068HFG05	1800	192	211	169	175	191	153	93	10.8	■
				1500	165	180	144	150	163	130	93	9.9	
210 (170)	PSL 6.8L	6 cyl.	6068HFG06	1800	216	236	189	196	213	171	93	13.0	■
				1500	197	215	172	179	194	155	93	11.8	
235 (190)	PSL 6.8L	6 cyl.	6068HFG06	1800	240	262	210	218	237	190	93	14.4	■
				1500	197	214	171	179	193	154	93	13.1	
270 (215)	PSL 9.0L	6 cyl.	6090HFG06	1800	273	298	239	249	270	216	93	16.4	■
				1500	273	300	240	249	272	218	93	14.9	
320 (250)	PSL 9.0L	6 cyl.	6090HFG06	1800	326	356	285	297	322	258	93	19.6	■
				1500	300	328	262	273	297	237	93	17.8	
-	PSL 9.0L	6 cyl.	6090HFG06	1800	345	377	302	-	-	-	93	20.7	■
				1500	300	327	261	-	-	-	93	18.9	
500 (400)	JD14X	6 cyl.	6136CG440	1800	505	555	444	462	500	400	93	27.6	■
				1500	505	564	451	462	507	406	93	20.0	

Engines for EPA Tier 3 and New Source Performance Standards (NSPS) applications 60 Hz

Engines for emergency standby applications.
These mechanical and electronic engines provide reliable, compact power and low installation costs.

Node	Engine name	Type	Engine model	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power
kVA (kWe) standby				rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW
35 (30)	M 2.9L	3 cyl.	3029TFG89	1800	35	37	30	31	32	29	90	2.2
50 (40)	M 2.9L	3 cyl.	3029HFG89	1800	46	49	39	42	44	35	90	2.9
60 (50)	M 4.5L	4 cyl.	4045TF290	1800	55	58	47	50	53	42	90	3.3
70 (55)	M 4.5L	4 cyl.	4045TF280	1800	63	69	55	57	62	50	90	1.9
80 (65)	M 4.5L	4 cyl.	4045HF280	1800	74	81	65	67	73	58	90	2.2
80 (65)	E 4.5L	4 cyl.	4045TF285	1800	74	77	62	67	70	56	90	5.2
100 (80)	E 4.5L	4 cyl.	4045HF285	1800	94	102	82	86	93	74	92	5.2
125 (100)	E 4.5L	4 cyl.	4045HF285	1800	118	128	103	107	116	92	92	6.5
160 (125)	Plus 4.5L	4 cyl.	4045HFG85	1800	147	162	129	134	147	117	92	6.5
160 (125)	E 6.8L	6 cyl.	6068HF285	1800	147	160	128	134	145	116	92	8.1
190 (150)	E 6.8L	6 cyl.	6068HF285	1800	177	192	154	161	174	139	92	9.8
230 (180)	E 6.8L	6 cyl.	6068HFG82	1800	212	232	185	193	210	168	93	12.6
255 (200)	Plus 6.8L	6 cyl.	6068HFG85	1800	235	257	205	214	232	186	93	14.1
275 (220)	E 9.0L	6 cyl.	6090HFG84	1800	258	278	222	235	251	201	93	18.9
310 (250)	E 9.0L	6 cyl.	6090HF484	1800	287	314	251	258	280	224	93	17.2
340 (275)	E 9.0L	6 cyl.	6090HF484	1800	315	344	275	287	312	249	93	18.9
345 (275)	Plus 9.0L	6 cyl.	6090HFG85	1800	315	347	278	287	315	252	93	16.1
380 (300)	E 9.0L	6 cyl.	6090HFG86	1800	345	379	303	-	-	-	93	19.3

Engines for EPA Tier 3 and EU Stage III A applications

Dual frequency 60 Hz/50 Hz

Engines for emergency standby applications.
These mechanical and electronic engines provide reliable, compact power and low installation costs.

Node	Engine name	Type	Engine model	Power unit model*	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.	RoHS
kVA prime					rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW		
30	M 2.9L	3 cyl.	3029TFG89†	3029TFU89†	1800	35	37	30	32	34	27	90	3.4	■	■
					1500	31	33	27	28	30	24	90	2.0		
40	M 2.9L	3 cyl.	3029HFG89†	3029HFU89†	1800	46	49	39	42	45	36	90	2.2	■	■
					1500	43	46	37	39	42	33	90	2.2		
60	M 4.5L	4 cyl.	4045HFG81	4045HFU81	1800	65	69	56	59	63	50	90	15.3	■	■
					1500	61	65	52	56	59	47	90	9.1		
80	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1800	86	92	74	78	83	67	90	15.3	■	■
					1500	83	89	71	76	80	64	90	9.1		
100	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1800	106	116	93	96	105	84	92	15.3	■	■
					1500	103	113	90	94	102	81	92	9.1		
120	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1800	126	138	110	115	125	100	92	9.1	■	■
					1500	123	134	108	112	122	97	92	5.2		
150	E 6.8L	6 cyl.	6068HFG82	6068HFU82	1800	156	170	136	142	154	123	92	22.5	■	■
					1500	153	167	134	139	151	121	92	13.1		
200	E 6.8L	6 cyl.	6068HFG82	6068HFU82	1800	212	234	187	193	212	170	93	24.7	■	■
					1500	202	223	178	184	202	162	93	14.3		
250	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1800	258	285	228	235	258	206	93	29.4	■	■
					1500	253	279	224	230	253	202	93	17.0		
300	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1800	315	348	278	287	315	252	93	29.4	■	■
					1500	304	336	269	277	304	243	93	17.0		

*Power unit includes factory-mounted cooling package, air filter, and feet.
†50 Hz/60 Hz dual frequency is a customer-selectable option and meets EU Stage III A and EPA Tier 3 emissions regulations.

Engines for non-emissions regulated applications

Dual frequency 60 Hz/50 Hz

Engines for regions not subject to emissions regulations. Power nodes from 30 to 200 kVA use mechanical fuel systems, while 225 to 500 kVA nodes feature HPCR fuel systems and full authority electronic controls.

Node	Engine name	Type	Engine model	Power unit model*	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.	RoHS
kVA prime					rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW		
30	M 2.9L	3 cyl.	3029DFG20	3029DFU20	1800	35	38	30	32	34	27	90	1.8	■	■
					1500	31	33	27	28	30	24	90	1.6		
40	M 2.9L	3 cyl.	3029TFG20	3029TFU20	1800	48	51	41	44	46	37	90	2.4	■	■
					1500	42	45	36	39	41	33	90	2.1		
60	M 2.9L	3 cyl.	3029HFG20	3029HFU20	1800	66	70	56	61	65	52	90	3.6	■	■
					1500	55	58	47	51	54	43	90	3.1		
80	M 4.5L	4 cyl.	4045TFG20	4045TFU20	1800	97	106	84	89	96	77	92	4.7	■	■
					1500	85	92	74	79	86	68	92	4.1		
100	M 4.5L	4 cyl.	4045HFG20	4045HFU20	1800	115	125	100	105	114	91	92	5.7	■	■
					1500	103	113	90	96	105	85	92	5.1		
120	M 4.5L	4 cyl.	4045HFG20	4045HFU20	1800	133	145	116	121	131	105	92	6.8	■	■
					1500	122	133	107	112	122	97	92	6.1		
150	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1800	164	179	143	150	163	130	92	8.5	■	■
					1500	157	172	137	144	157	125	92	7.7		
180	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1800	196	213	171	179	194	155	92	10.5	■	■
					1500	184	201	161	170	185	148	92	9.2		
200	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1800	210	232	186	191	210	168	93	10.5	■	■
					1500	202	223	179	184	202	162	93	10.1		
225	E 6.8L	6 cyl.	6068HFG25	-	1800	236	261	209	215	236	189	93	11.8	■	-
					1500	225	249	199	205	225	180	93	11.3		
250	E 6.8L	6 cyl.	6068HFG55	6068HFU55	1800	260	287	230	237	260	208	93	13.0	■	■
					1500	250	276	221	228	250	200	93	12.5		
300	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1800	315	348	278	287	315	252	93	15.8	■	-
					1500	304	336	269	277	304	243	93	15.2		

*Power unit includes factory-mounted cooling package, air filter, and feet.

Definitions and conversions

Prime power is the nominal power an engine is capable of delivering with a variable load for an unlimited number of hours per year. This rating conforms to ISO 3046 and SAE J1995.

Standby power as defined in ISO 8528-1 is the maximum engine power available at varying load factors for up to 200 hours per year. This rating conforms to ISO 3046 and SAE J1995. The calculated generator-set rating range for standby applications is based on minimum engine power (nominal -5%) to provide 100% meet-or-exceed performance for assembled standby generator sets.

Generator drive rating (kWe)

[Engine power - Fan power loss] x Generator efficiency

Note:
DFM, TFM, AFM, and SFM generator drive ratings do not have fan power loss.

Power factor (PF)

kWe & kVA = Real power / Apparent power
PF constant = 0.80

Formulas

Standby power = Prime power x 110% overload capacity
kVA rating = kWe rating / 0.80
hp = kW x 1.34

Estimated electrical power is calculated from the typical generator efficiency and fan power percentages shown. Applications may vary.

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