



Introduction

This guidance document is to assist owners and operators of stationary, spark ignition (SI), internal combustion engines (ICE) in determining their requirements under the new source performance standard (NSPS), [40 CFR Part 60, Subpart JJJJ](#). The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand as defined in 40 CFR Part 63, Subpart PPPPP. See page (2) regarding temporary replacement units¹. Part of the rule also applies to manufacturers of SI ICE and is not addressed in this document.

Gather the following information about your engine:

- Certified² or non-certified³ by the manufacturer
- Emergency or non-emergency
- Fuel burned
- Lean burn or rich burn
- Size in horsepower (HP)
- Construction date
- Manufacture date
- Modified or reconstructed after June 12, 2006

Does this rule apply to your facility? [40 CFR Part 60.4230]

You are subject to the rules of NSPS Subpart JJJJ if you own/operate a stationary SI ICE whose construction date (date the engine was ordered by the owner or operator) began after June 12, 2006, and was manufactured by the dates listed in the table below.

Engine types subject to NSPS Subpart JJJJ constructed (ordered), modified or reconstructed after June 12, 2006	Date of manufacture on/after
SI ICE>500 HP (except lean burn 500≤HP<1,350)	July 1, 2007
SI ICE lean burn 500≤HP<1,350 HP	January 1, 2008
SI ICE<500 HP	July 1, 2008
Emergency SI ICE>25 HP (19KW)	January 1, 2009
All SI ICE modified or reconstructed after June 12, 2006	

Modified stationary internal combustion engine means an engine that has undergone “any physical change in the method of operation...which increases the amount of any pollutant emitted by such source or which results in the emission of air pollutant not previously emitted. (40 CFR 60.14)

Reconstructed stationary internal combustion engine means an engine that has undergone modification to such an extent that the capital cost of the new or refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new unit. Reconstructed engines are assigned a new manufacture date. (40 CFR 60.4248)

Certified stationary internal combustion engine² means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements of in 40 CFR part 60 Subpart JJJJ, or of 40 CFR part 90, 40 CFR part 1048, or of 40 CFR part 1054, as appropriate. (40 CFR 60.4248)

For additional help the [EPA engine determination tool](#) is an online tool developed by EPA to assist owners and operators identify the specific requirements of the regulation to their engine(s).

The following tables are a summary of the requirements and are intended as guidance. If a conflict exists between this document and the regulation, the regulation shall take precedence.



<p align="center">Owners/operators of non-emergency engines¹ Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply.⁷ Engines constructed, modified, or reconstructed on or before July 12, 2006 are not subject to this subpart.</p>							
Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records
<p>≤25 HP (19KW) All Fuel</p>	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> • §60.4234 • §60.4243(a)(1) • If using AFRC: §60.4243(g) • 40 CFR part 1068, Subparts A-D, as applicable. <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • §60.4234 • §60.4243(a)(2)(i) • If using AFRC: §60.4243(g) 	<p>If using gasoline: §60.4235</p>	<p>§60.4236(a), (d)</p>	<p>NONE</p>	<p>§60.4233(a)</p>	<p>NONE</p>	<p>§60.4245(a)</p>



Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of non-emergency engines¹

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Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records
25<HP<500 Gasoline	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> • §60.4234 • §60.4243(a)(1) • If using AFRC: §60.4243(g) • 40 CFR part 1068, Subparts A-D, as applicable. <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • All engines: §60.4234 • If using AFRC: §60.4243(g) • <100 HP: §60.4243(a)(2)(i) • 100≤HP≤500: §60.4243(a)(2)(ii) 	§60.4235	§60.4236(a), (d)	NONE	§60.4233(b)	<p><u>Operated and maintained in a certified² manner:</u> NONE</p> <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • <100 HP: No performance testing required. • 100≤HP≤500: §60.4243(a)(2)(ii)⁵ §60.4244 	§60.4245(a), (d)



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25<HP<500 Rich Burn LPG	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> • §60.4234 • §60.4243(a)(1) • If using AFRC: §60.4243(g) • 40 CFR part 1068, Subparts A-D, as applicable. <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • All engines: §60.4234 • If using AFRC: §60.4243(g) • <100 HP: 60.4243(a)(2)(i) • 100≤HP≤500: 60.4243(a)(2)(ii) 	NONE	§60.4236(a), (d)	NONE	§60.4233(c)	<p><u>Operated and maintained in a certified² manner:</u> NONE</p> <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • <100 HP: No performance testing required. • 100≤HP≤500: §60.4243(a)(2)(ii)⁵ §60.4244 	§60.4245(a), (d)



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Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records																		
25<HP<100 (except gasoline and rich burn LPG)	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 If using AFRC: §60.4243(g) If purchasing certified engine: §60.4243(b)(1) If purchasing non-certified engine: §60.4243(b)(2) <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 §60.4243(a)(2)(i) If using AFRC: §60.4243(g) 	<p>NONE</p>	<p>§60.4236(a)</p>	<p>NONE</p>	<p>§60.4233(d)⁴ If manufactured prior to January 1, 2011, and engine is certified to the standards in Table 1 Mfg. Date: 7/1/2008 to 12/31/ 2010</p> <table border="1" data-bbox="1220 607 1520 813"> <thead> <tr> <th colspan="3">g/HP-hr.</th> <th colspan="3">ppmvd at 15% O₂</th> </tr> <tr> <th>NO_x</th> <th>CO</th> <th>VOC</th> <th>NO_x</th> <th>CO</th> <th>VOC</th> </tr> </thead> <tbody> <tr> <td>2.0</td> <td>4.0</td> <td>1.0</td> <td>160</td> <td>540</td> <td>86</td> </tr> </tbody> </table>	g/HP-hr.			ppmvd at 15% O ₂			NO _x	CO	VOC	NO _x	CO	VOC	2.0	4.0	1.0	160	540	86	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> <u>Certified engine:</u> NONE <u>Non-certified engine:</u> §60.4243(b)(2)(i)⁵, §60.4244 <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4244 <u>Non-certified engine:</u> ≥100 HP: §60.4243(a)(2)(ii) <u>Non-certified engine:</u> §60.4243(b)(2)(i)⁵ 	<p>§60.4245(a), (d)</p>
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Landfill/digester Gas < 500 HP (except lean burn 500≤HP<1,350 HP)	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 If using AFRC: §60.4243(g) If purchasing certified engine: §60.4243(b)(1) If purchasing non-certified engine: §60.4243(b)(2) <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 §60.4243(a)(2)(i) If using AFRC: §60.4243(g) 	<p>NONE</p>	<p>§60.4236(a)</p>	<p>NONE</p>	<p>§60.4233 Table 1</p> <p>Mfg. Date: 7/1/2008</p> <table border="1" data-bbox="1220 524 1522 727"> <tr> <td colspan="3">g/HP-hr.</td> <td colspan="3">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>3.0</td> <td>5.0</td> <td>1.0</td> <td>220</td> <td>610</td> <td>80</td> </tr> </table> <p>Mfg. Date: 7/1/2011</p> <table border="1" data-bbox="1220 784 1522 987"> <tr> <td colspan="3">g/HP-hr.</td> <td colspan="3">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>2.0</td> <td>5.0</td> <td>1.0</td> <td>150</td> <td>610</td> <td>80</td> </tr> </table>	g/HP-hr.			ppmvd at 15% O ₂			NO _x	CO	VOC	NO _x	CO	VOC	3.0	5.0	1.0	220	610	80	g/HP-hr.			ppmvd at 15% O ₂			NO _x	CO	VOC	NO _x	CO	VOC	2.0	5.0	1.0	150	610	80	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> <u>Certified engine maintained as certified:</u> NONE <u>Non-certified (maintained as certified engine):</u> §60.4243(b)(2)(i), §60.4244 <p><u>Non-certified³:</u></p> <ul style="list-style-type: none"> <u>All engines:</u> §60.4244 <u>Non-certified (maintained as certified engine):</u> §60.4243(a)(2)(ii) <u>Non-certified (maintained as non-certified engine):</u> §60.4243(b)(2)(i) 	<p>§60.4245(a), (d)</p>
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Lean burn Natural Gas and LPG 500≤HP<1,350	<u>Operated and maintained in a certified² manner:</u> <ul style="list-style-type: none"> • §60.4234 • §60.4243(a)(1) • If using AFRC: §60.4243(g) • 40 CFR part 1068, Subparts A-D, as applicable. <u>Non-certified³ manner:</u> <ul style="list-style-type: none"> • All engines: §60.4234 • §60.4243(a)(2)(iii) • If using AFRC: §60.4243(g) 	If using gasoline: §60.4235	§60.4236(b)	NONE	§60.4233(e) Table 1 Mfg. Date: 1/1/2008 <table border="1" style="margin-left: 20px;"> <tr> <td colspan="2">g/HP-hr.</td> <td colspan="2">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>2.0</td> <td>4.0</td> <td>1.0</td> <td>160</td> <td>540</td> <td>86</td> </tr> </table> Mfg. Date: 7/1/2010 <table border="1" style="margin-left: 20px;"> <tr> <td colspan="2">g/HP-hr.</td> <td colspan="2">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>1.0</td> <td>2.0</td> <td>0.7</td> <td>82</td> <td>270</td> <td>60</td> </tr> </table>	g/HP-hr.		ppmvd at 15% O ₂		NO _x	CO	VOC	NO _x	CO	VOC	2.0	4.0	1.0	160	540	86	g/HP-hr.		ppmvd at 15% O ₂		NO _x	CO	VOC	NO _x	CO	VOC	1.0	2.0	0.7	82	270	60	<u>Operated and maintained in a certified² manner:</u> <ul style="list-style-type: none"> • <u>Certified engine (maintained as certified):</u> NONE • <u>Non-certified (maintained as certified engine):</u> NONE <u>Non-certified³ manner:</u> <p style="margin-left: 20px;">§60.4243(a)(2)(iii)⁵ §60.4244</p>	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)
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Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of non-emergency engines¹

Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply.⁷
 Engines constructed, modified, or reconstructed on or before July 12, 2006 are not subject to this subpart.

Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records
≥500 HP Gasoline (except lean burn 500 ≤ HP <1,350)	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 If using AFRC: §60.4243(g) If manufactured after 7/1/2007 and before 7/1/2008: §60.4243(h) If manufactured after 7/1/2008: §60.4243(a)(1) 40 CFR part 1068, Subparts A-D, as applicable. <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> All engines: §60.4234 If using AFRC: §60.4243(g) If manufactured after 7/1/2007 and before 7/1/2008: §60.4243(h) If manufactured after 7/1/2008: §60.4243(a)(2)(iii) 	§60.4235	§60.4236(b), (d)	NONE	§60.4233(b)	<p><u>Operated and maintained in a certified² manner:</u> NONE</p> <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> If manufactured after 7/1/2007 and before 7/1/2008: No performance testing required. If manufactured after 7/1/2008: §60.4243(a)(2)(iii)⁵ §60.4244 	<p>All engines: §60.4245(a), (d)</p> <p>If engine is not certified: §60.4245(c)</p>



Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

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Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records
≥500 HP Rich Burn LPG	<p><u>Operated and maintained in a certified² manner:</u></p> <ul style="list-style-type: none"> • All engines: §60.4234 • If using AFRC: §60.4243(g) • If manufactured after 7/1/2007 and before 7/1/2008: §60.4243(h) • If manufactured after 7/1/2008: §60.4243(a)(1) • 40 CFR part 1068, Subparts A-D, as applicable. <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • All engines: §60.4234 • If using AFRC: §60.4243(g) • If manufactured after 7/1/2007 and before 7/1/2008: §60.4243(h) • If manufactured after 7/1/2008: §60.4243(a)(2)(iii) 	NONE	§60.4236(b), (d)	NONE	§60.4233(c)	<p><u>Operated and maintained in a certified² manner:</u> NONE</p> <p><u>Non-certified³ manner:</u></p> <ul style="list-style-type: none"> • If manufactured after 7/1/2007 and before 7/1/2008: No performance testing required. • If manufactured after 7/1/2008: §60.4243(a)(2)(iii)⁶ §60.4244 	<p>All engines: §60.4245(a), (d)</p> <p>If engine is not certified: §60.4245(c)</p>



Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of non-emergency engines¹

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Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records																																				
≥500 HP (except lean burn 500≤HP<1,350) & (except gasoline and rich burn LPG)	<ul style="list-style-type: none"> • All engines: §60.4234 • If using AFRC: §60.4243(g) • If purchasing certified engine: §60.4243(b)(1) §60.4243(a)(1) • If purchasing non-certified engine: §60.4243(b)(2) 	NONE	§60.4236(b)	NONE	§60.4233(e) Table 1 Mfg. Date: 7/1/2007 <table border="1" data-bbox="1220 526 1520 727"> <tr> <td colspan="3">g/HP-hr.</td> <td colspan="3">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>2.0</td> <td>4.0</td> <td>1.0</td> <td>160</td> <td>540</td> <td>86</td> </tr> </table> Mfg. Date: 7/1/2010 <table border="1" data-bbox="1220 786 1520 987"> <tr> <td colspan="3">g/HP-hr.</td> <td colspan="3">ppmvd at 15% O₂</td> </tr> <tr> <td>NO_x</td> <td>CO</td> <td>VOC</td> <td>NO_x</td> <td>CO</td> <td>VOC</td> </tr> <tr> <td>1.0</td> <td>2.0</td> <td>0.7</td> <td>82</td> <td>270</td> <td>60</td> </tr> </table>	g/HP-hr.			ppmvd at 15% O ₂			NO _x	CO	VOC	NO _x	CO	VOC	2.0	4.0	1.0	160	540	86	g/HP-hr.			ppmvd at 15% O ₂			NO _x	CO	VOC	NO _x	CO	VOC	1.0	2.0	0.7	82	270	60	<u>Operated and maintained in a certified² manner:</u> NONE <ul style="list-style-type: none"> • Non-certified operating as certified: §60.4243(b)(2)(ii), §60.4244 §60.4243(a)(2)(iii), §60.4244	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)
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Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of non-emergency engines¹ Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply. ⁷ Engines constructed, modified, or reconstructed on or before July 12, 2006 are not subject to this subpart.							
Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Installation Requirements ⁶	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records
Modified or reconstructed ≤25 HP All Fuels	<ul style="list-style-type: none"> • All engines: §60.4234 §60.4243(i) • If using AFRC: §60.4243(g) 	If using gasoline: §60.4235	NONE	If <130HP built on or after 7/1/2008, or 130≤HP<500 built on or after 1/1/2011, or ≥500 HP built on or after 7/1/2010 does not meet standards applicable to non-emergency engines §60.4237	§60.4233(f)(1) See applicable Table 1 emission limits for engine type and new manufacture date as applicable	<u>Certified²:</u> NONE <u>Non-certified³:</u> §60.4244	All engines: §60.4245(a)
Modified or reconstructed >25 HP Gasoline	<ul style="list-style-type: none"> • All engines: §60.4234 §60.4243(i) • If using AFRC: §60.4243(g) 	§60.4235	NONE		§60.4233(f)(2) See applicable Table 1 emission limits for engine type and new manufacture date as applicable	<u>Certified²:</u> NONE <u>Non-certified³:</u> §60.4244	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)
Modified or reconstructed >25 HP Rich Burn LPG	<ul style="list-style-type: none"> • All engines: §60.4234 §60.4243(i) • If using AFRC: §60.4243(g) 	NONE	NONE		§60.4233(f)(3) See applicable Table 1 emission limits for engine type and new manufacture date as applicable	<u>Certified²:</u> NONE <u>Non-certified³:</u> §60.4244	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)
Modified or reconstructed >25 HP SI natural gas and lean burn LPG	<ul style="list-style-type: none"> • All engines: §60.4234 §60.4243(i) • If using AFRC: §60.4243(g) 	NONE	NONE		§60.4233(f)(4) See applicable Table 1 emission limits for engine type and new manufacture date as applicable.	<u>Certified²:</u> NONE <u>Non-certified³:</u> §60.4244	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)
Modified or reconstructed >25 HP Landfill/Digester Gas	<ul style="list-style-type: none"> • All engines: §60.4234 §60.4243(i) • If using AFRC: §60.4243(g) 	NONE	NONE		§60.4233(f)(5) See applicable Table 1 emission limits for engine type and new manufacture date as applicable	<u>Certified²:</u> NONE <u>Non-certified³:</u> §60.4244	All engines: §60.4245(a), (d) If engine is not certified: §60.4245(c)



Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of emergency engines¹ Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply. ⁷ Reference 40 CFR 60.4236(c), (d) regarding installation deadlines. ⁶ Engines constructed, modified, or reconstructed on or before July 12, 2005 are not subject to this subpart.																														
Engine Type and Fuel:	Compliance Requirements	Fuel Requirements	Monitoring Requirements	Emission Standards	Testing Requirements	Notification, Reports, and Records																								
All Emergency Engines	<ul style="list-style-type: none"> Maintenance, readiness testing, NERC reliability, and deviation of voltage or frequency of $\geq 5\%$ below standard voltage or frequency is limited to 100 hrs. per year. [§60.4243(d)(2)]* Non-emergency use is limited to 50 hrs. per year and counts toward the 100 hrs. per year. [§60.4243(d)(3)] There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4243(d)(1)] 																													
>25 HP Gasoline	<p>Certified²:</p> <ul style="list-style-type: none"> All engines: §60.4234 §60.4243(a)(1) §60.4243(d) If using AFRC: §60.4243(g) 40 CFR part 1068, Subparts A-D, as applicable. <p>Non-certified³:</p> <ul style="list-style-type: none"> All engines: §60.4234 §60.4243(d)* If using AFRC: §60.4243(g) If <100 HP §60.4243(a)(2)(i) If 100 < HP < 500 §60.4243(a)(2)(ii) If > 500 HP §60.4243(a)(2)(iii) 	§60.4235	<p>§60.4237(a)</p> <p>Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Engine HP</th> <th style="text-align: center;">Mfg. Date</th> <th style="text-align: center;">Monitoring Requirement</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≥500</td> <td style="text-align: center;">7/1/10 or later</td> <td style="text-align: center;">install a non-resettable hour meter</td> </tr> <tr> <td style="text-align: center;">130 ≤ HP < 500</td> <td style="text-align: center;">1/1/11 or later</td> <td style="text-align: center;">install a non-resettable hour meter</td> </tr> <tr> <td style="text-align: center;"><130 HP</td> <td style="text-align: center;">7/1/08 or later</td> <td style="text-align: center;">install a non-resettable hour meter</td> </tr> </tbody> </table>	Engine HP	Mfg. Date	Monitoring Requirement	≥500	7/1/10 or later	install a non-resettable hour meter	130 ≤ HP < 500	1/1/11 or later	install a non-resettable hour meter	<130 HP	7/1/08 or later	install a non-resettable hour meter	§60.4233(b)	<p>Certified²: NONE</p> <p>Non-certified³:</p> <ul style="list-style-type: none"> <100 HP: None 100 ≤ HP ≤ 500: §60.4243(a)(2)(ii)⁶ §60.4244 >500 HP: §60.4243(a)(2)(iii)⁵ §60.4244 	<p>§60.4245(a), (b)</p> <p>Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Engine HP</th> <th style="text-align: center;">Mfg. Date</th> <th style="text-align: center;">Records</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≥500</td> <td style="text-align: center;">7/1/10 or later</td> <td style="text-align: center;">Hrs. of Operation</td> </tr> <tr> <td style="text-align: center;">130 ≤ HP < 500</td> <td style="text-align: center;">1/1/11 or later</td> <td style="text-align: center;">Hrs. of Operation</td> </tr> <tr> <td style="text-align: center;"><130 HP</td> <td style="text-align: center;">7/1/08 or later</td> <td style="text-align: center;">Hrs. of Operation</td> </tr> </tbody> </table> <ul style="list-style-type: none"> If > 100 HP and contractually obligated to operate > 15 hrs. per calendar year for purposes of §60.4243(d)(2)(ii) and (iii) or §60.4243(d)(3)(i): §60.4245(e) 	Engine HP	Mfg. Date	Records	≥500	7/1/10 or later	Hrs. of Operation	130 ≤ HP < 500	1/1/11 or later	Hrs. of Operation	<130 HP	7/1/08 or later	Hrs. of Operation
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Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of emergency engines¹

Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply.⁷

Reference 40 CFR 60.4236(c), (d) regarding installation deadlines.⁶

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>25 HP Rich Burn LPG	Certified²: <ul style="list-style-type: none"> All engines: §60.4234 §60.4243(a)(1) §60.4243(d)* If using AFRC: §60.4243(g) 40 CFR part 1068, Subparts A-D, as applicable. 	NONE	§60.4237(a) Engines not meeting the standards applicable to non-emergency engines, see the following table:	§60.4233(c)	Certified²: NONE Non-certified³: <ul style="list-style-type: none"> If <100 HP: None If 100≤HP≤500: §60.4243(a)(2)(ii)⁵ §60.4244 If >500 HP: §60.4243(a)(2)(iii)⁵ §60.4244 	§60.4245(a), (b) Engines not meeting the standards applicable to non-emergency engines, see the following table:																				
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Owners/operators of emergency engines¹

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<p>25<HP<100 (except gasoline and rich burn LPG)</p>	<p>All engines operated and maintained in a certified² manner: §60.4234 §60.4243(d)* • If using AFRC: §60.4243(g)</p> <p><u>If purchasing a certified engine:</u> §60.4243(b)(1)</p> <p><u>If purchasing a non-certified engine:</u> §60.4243(b)(2)</p> <p>All engines operated and maintained in a non-certified³ manner: §60.4234 §60.4243(a)(2)(i) §60.4243(d)* • If using AFRC: §60.4243(g)</p>	<p>NONE</p>	<p>§60.4237(a)</p> <p>Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" data-bbox="743 509 1211 972"> <thead> <tr> <th>Engine HP</th> <th>Manufacture Date</th> <th>Monitoring Requirement</th> </tr> </thead> <tbody> <tr> <td>≥500</td> <td>7/1/10 or later</td> <td>install a non-resettable hour meter</td> </tr> <tr> <td>130≤HP<500</td> <td>1/1/11 or later</td> <td>install a non-resettable hour meter</td> </tr> <tr> <td><130 HP</td> <td>7/1/08 or later</td> <td>install a non-resettable hour meter</td> </tr> </tbody> </table>	Engine HP	Manufacture Date	Monitoring Requirement	≥500	7/1/10 or later	install a non-resettable hour meter	130≤HP<500	1/1/11 or later	install a non-resettable hour meter	<130 HP	7/1/08 or later	install a non-resettable hour meter	<p>§60.4233(d)⁴</p>	<p>All engines</p> <ul style="list-style-type: none"> • If natural gas engine and using propane as alternative fuel for more than 100 hrs/yr: §60.4243(e) • <u>Non-certified (operated and maintained as certified engine):</u> §60.4243(b)(2)(i)⁵, §60.4244 • <u>Certified engine (maintained as non-certified):</u> NONE • <u>Non-certified (operated and maintained as non-certified)</u> • All >25 HP: §60.4244 • If 25>HP≤500: §60.4243(b)(2)(i)⁵ 	<p>§60.4245(a), (b) Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" data-bbox="1667 495 2011 873"> <thead> <tr> <th>Engine HP</th> <th>Mfd. Date</th> <th>Records</th> </tr> </thead> <tbody> <tr> <td>≥500</td> <td>7/1/10 or later</td> <td>Hrs. of Operation</td> </tr> <tr> <td>130≤HP<500</td> <td>1/1/11 or later</td> <td>Hrs. of Operation</td> </tr> <tr> <td><130 HP</td> <td>7/1/08 or later</td> <td>Hrs. of Operation</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • <u>If > 100 HP and contractually obligated to operate > 15 hrs. per calendar year for purposes of §60.4243(d)(2)(ii) and (iii) or §60.4243(d)(3)(i):</u> §60.4245(e) • <u>If natural gas engine and using propane as alternative fuel solely during emergency operations:</u> §60.4243(e) 	Engine HP	Mfd. Date	Records	≥500	7/1/10 or later	Hrs. of Operation	130≤HP<500	1/1/11 or later	Hrs. of Operation	<130 HP	7/1/08 or later	Hrs. of Operation
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Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of emergency engines¹

Engines constructed (ordered), modified or reconstructed after June 12, 2006. Manufacture dates apply.⁷

Reference 40 CFR 60.4236(c) regarding installation deadlines.⁶

Engines constructed, modified, or reconstructed on or before July 12, 2005 are not subject to this subpart.

<p>≥100 HP (except gasoline and rich burn LPG)</p>	<p>All engines operated and maintained in a certified² manner: §60.4234 §60.4243(d)* • If using AFRC: §60.4243(g)</p> <p><u>If purchasing a certified engine:</u> §60.4243(b)(1)</p> <p><u>If purchasing a non-certified engine:</u> §60.4243(b)(2)</p> <p>All engines operated and maintained in a non-certified³ manner: §60.4234 §60.4243(d)* • If using AFRC: §60.4243(g)</p> <p><u>100<HP<500:</u> §60.4243(a)(2)(ii) <u>> 500 HP:</u> §60.4243(a)(2)(iii)</p>	<p>NONE</p>	<p>§60.4237(a) Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" data-bbox="745 462 1165 917"> <thead> <tr> <th>Engine HP</th> <th>Manufacture Date</th> <th>Monitoring Requirement</th> </tr> </thead> <tbody> <tr> <td>≥500</td> <td>7/1/10 or later</td> <td>install a non-resettable hour meter</td> </tr> <tr> <td>130≤HP<500</td> <td>1/1/11 or later</td> <td>install a non-resettable hour meter</td> </tr> <tr> <td><130 HP</td> <td>7/1/08 or later</td> <td>install a non-resettable hour meter</td> </tr> </tbody> </table>	Engine HP	Manufacture Date	Monitoring Requirement	≥500	7/1/10 or later	install a non-resettable hour meter	130≤HP<500	1/1/11 or later	install a non-resettable hour meter	<130 HP	7/1/08 or later	install a non-resettable hour meter	<p>§60.4233(e)⁵ Table 1</p>	<p>All engines:</p> <ul style="list-style-type: none"> • <u>If natural gas engine and using propane as alternative fuel for more than 100 hrs/yr:</u> §60.4243(e) • <u>Certified engine (operated and maintained as certified):</u> NONE • <u>Non-certified engine (operated and maintained as certified engine):</u> • 25>HP≤500: §60.4243(b)(2)(i)⁵, §60.4244 • >500 HP: §60.4243(b)(2)(ii) §60.4244 • <u>Certified engine (operated and maintained as non-certified):</u> • ≥100 HP: §60.4244 • 100≤HP≤500: §60.4243(a)(2)(ii) • >500 HP: §60.4243(a)(2)(iii) • <u>Non-certified (operated and maintained as non-certified)</u> • All >25 HP: §60.4244 • 25>HP≤500: §60.4243(b)(2)(i)⁵ • >500 HP: §60.4243(b)(2)(ii) 	<p>§60.4245(a), (b) Engines not meeting the standards applicable to non-emergency engines, see the following table:</p> <table border="1" data-bbox="1669 495 2005 868"> <thead> <tr> <th>Engine HP</th> <th>Mfd. Date</th> <th>Records</th> </tr> </thead> <tbody> <tr> <td>≥500</td> <td>7/1/10 or later</td> <td>Hrs. of Operation</td> </tr> <tr> <td>130≤HP<500</td> <td>1/1/11 or later</td> <td>Hrs. of Operation</td> </tr> <tr> <td><130 HP</td> <td>7/1/08 or later</td> <td>Hrs. of Operation</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • <u>If > 100 HP and contractually obligated to operate > 15 hrs. per calendar year for purposes of §60.4243(d)(2)(ii) and (iii) or §60.4243(d)(3)(i):</u> §60.4245(e) • <u>If natural gas engine and using propane as alternative fuel solely during emergency operations:</u> §60.4243(e) 	Engine HP	Mfd. Date	Records	≥500	7/1/10 or later	Hrs. of Operation	130≤HP<500	1/1/11 or later	Hrs. of Operation	<130 HP	7/1/08 or later	Hrs. of Operation
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Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) – 40 CFR Part 60, Subpart JJJJ

Owners/operators of non-emergency and emergency SI ICE Installation deadlines and footnotes

Installation deadlines (§60.4236) Does not apply to SI ICEs that have been modified/reconstructed or that are removed from one location and reinstalled at a new location.	Date to stop installing/importing
Stationary SI ICE < 500 HP that do not meet requirements of 40 CFR part 60.4233.	July 1, 2010
Stationary SI ICE ≥ 500 HP that do not meet requirements of 40 CFR part 60.4233, except lean burn engines 500≤HP<1,350 HP do not meet requirements of 40 CFR part 60.4233.	July 1, 2009
Emergency Stationary SI ICE > 25 HP (19 KW) that do not meet requirements of 40 CFR part 60.4233.	January 1, 2011
Stationary SI ICE < 25 HP (19 KW) that do not meet requirements of 40 CFR part 60.4233.	July 1, 2010
Any HP stationary rich burn LPG SI ICE that do not meet the requirements of 40 CFR part 60.4233 before the corresponding dates specified in 40 CFR part 60.4236(a), (b) or (c).	July 1, 2009 or later
Any HP stationary gasoline SI ICE that do not meet the requirements of 40 CFR part 60.4233 before the corresponding dates specified in 40 CFR part 60.4236(a), (b) or (c).	July 1, 2009 or later

§60.4230(b) - the provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

§60.4230(f) - Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

§60.4233(g) - Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of after-treatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of after-treatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

***§60.4233(d)(2)** -On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 60.4243(d)(2)(ii)-(iii).

§60.4248 - Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d).



NOTE: For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

Footnotes:

- ¹ Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.
- ² If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you are operating in a certified manner.
- ³ If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to manufacturer's emission-related written instructions, your engine will be considered a non-certified engine.
- ⁴ Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.
- ⁵ If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- ⁶ The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.
- ⁷ Engines constructed (ordered), modified or reconstructed after June 12, 2006. Reference 40 CFR 60.4230 Am I subject to this subpart? Manufacture dates apply.

Abbreviations

- AFRC: Air-to Fuel Ratio Controller
CO: Carbon Monoxide
HP: Horsepower
ICE: Internal Combustion Engine
LPG: Liquefied Petroleum Gas
SI: Spark Ignition

Guidance developed using EPA Summary tables available at <https://www.epa.gov/stationary-engines/implementation-tools-nsps-spark-ignition-internal-combustion-engines>