

Updated MACT ZZZZ Requirements for Existing Stationary Reciprocating Internal Combustion Engines^{1,2,3}

	AREA SOURCE	MAJOR SOURCE
Existing Non-Emergency CI > 500 HP⁴		
During Startup	Minimize engine idle time and startup to period needed for appropriate and safe loading, not to exceed 30 minutes	Same as area source
Except during Startup	<ul style="list-style-type: none"> 23 ppmvd CO or less at 15% O₂ or 70% CO reduction Install a closed crankcase ventilations system that prevents crankcase emissions to the atmosphere or install an open crankcase filtration emission control system that reduces emissions by filtering to remove oil mist, particulates and metal 	Same as area source
Operating Limitations	<ul style="list-style-type: none"> If equipped with oxidation catalyst, maintain catalyst so that pressure drop across catalyst does not change by more than 2 inches of water from the pressure drop that was measured during initial performance test and maintain temperature of exhaust so that catalyst inlet temp is between 450 and 1350 F, or if not using oxidation catalyst, comply with operating limitations approved by Administrator Follow manufacturer's maintenance requirements for operating and maintaining the crankcase ventilation systems and replacing the crankcase filters 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	<ul style="list-style-type: none"> Maximum sulfur content of 15 ppm Maximum aromatic content of 35% (volume) or minimum cetane value of 40 	Same as area source
Demonstrating Compliance	Initial performance test and testing every 8,760 hours of operation or 3 years, whichever comes first.	If using an oxidation catalyst, continuously monitor and record catalyst inlet temperature and measure pressure drop across catalyst monthly. Otherwise, continuously monitor operating parameters approved by Administrator
Testing	Initial performance test and testing every 8,760 hours of operation or 3 years, whichever comes first.	Same as area source
Existing Emergency CI > 500 HP		
During Startup	Minimize engine idle time and startup to period needed for appropriate and safe loading, not to exceed 30 minutes	Per 63.6600(c) and 63.6640(e), not required to meet emission limitations or operating limits included in Tables 1a, 1b, 2a, 2b, 2c, or 2d or requirements from the General Provisions included in Table 8.
Work Practice Standards	<ul style="list-style-type: none"> Change oil and filter every 500 hours of operation or annually, whichever comes first Inspect air cleaner every 1000 hours or annually, whichever comes first Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first 	
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	
Operating Limitations	<ul style="list-style-type: none"> Maintenance and readiness checks limited to 100 hours/year Can operate engine for 50 hours/year for non-emergency purposes, but counted toward 100 hours above. The 50 hours cannot be used to generate income for a facility, except that 15 hours/year is allowed as part of an emergency demand response program. 	
Demonstrating Compliance	<ul style="list-style-type: none"> Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions, or implement your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions Install a non-resettable hour meter 	
Testing	None	
Existing Non-Emergency CI 300 < HP < 500⁴		
During Start-Up	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 minutes	Same as area source
Except During Startup	<ul style="list-style-type: none"> 49 ppmvd CO or less at 15% O₂ or 70% CO reduction Install a closed crankcase ventilation system that prevents crankcase emissions to the atmosphere or install an open crankcase filtration emission control system that reduces emissions by filtering oil mist, particulates, and metals 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	<ul style="list-style-type: none"> Maximum sulfur content of 15 ppm Maximum aromatic content of 35% (volume) or minimum cetane value of 40 	Same as area source
Operating Limitations	Follow manufacturer's maintenance requirements for operating and maintaining the crankcase ventilation systems and replacing the crankcase filters	Same as area source
Demonstrating Compliance	Initial performance test	Same as area source
Testing	Initial performance test	Same as area source
Existing Emergency CI 300 < HP ≤ 500		
During Startup	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 minutes	Same as area source
Work Practice Standards	<ul style="list-style-type: none"> Change oil and filter every 500 hours of operation or annually, whichever comes first Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first Inspect hoses and belts every 500 hours of operation or annually, whichever comes first 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	None
Operating Limitations	<ul style="list-style-type: none"> Maintenance and readiness checks limited to 100 hours/year Can operate engine for 50 hours/year for non-emergency purposes, but counted toward 100 hours above. The 50 hours cannot be used to generate income for a facility, except 15 hours/year is allowed as part of an emergency demand response program 	Same as area source
Demonstrating Compliance	<ul style="list-style-type: none"> Operate and maintain the stationary RICE according to manufacturer's operation and maintenance instructions or implement your own maintenance plan that provides to the extent practicable for maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions Install a non-resettable hour meter 	Same as area source
Testing	None	None
Existing Non-Emergency CI 100 ≤ HP ≤ 300		
During Startup	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 minutes	Same as area source
Work Practice Standards Except During Startup	<ul style="list-style-type: none"> Change oil and filter every 1,000 hours of operation or annually, whichever comes first Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first Inspect hoses and belts every 500 hours of operation or annually, whichever comes first 	230 ppmvd CO or less at 15% O ₂
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	None
Operating Limitations	None	None
Demonstrating Compliance	Operate and maintain the stationary RICE according to manufacturer's instructions or implement a maintenance plan that provides for the maintenance and operation in a manner consistent with good air pollution control practices for minimizing emissions	Initial performance test
Testing	None	Initial performance test
Existing Emergency CI 100 ≤ HP ≤ 300		
During Startup	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 minutes	Same as area source
Work Practice Standards	<ul style="list-style-type: none"> Change oil and filter every 500 hours of operation or annually, whichever comes first Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first Inspect hoses and belts every 500 hours of operation or annually, whichever comes first 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	None
Operating Limitations	<ul style="list-style-type: none"> Maintenance and readiness checks limited to 100 hours/year Can operate engine for 50 hours/year for non-emergency purposes, but counted toward 100 hours above. The 50 hours cannot be used to generate income for a facility, except 15 hours/year is allowed as part of an emergency demand response program 	Same as area source
Demonstrating Compliance	<ul style="list-style-type: none"> Operate and maintain the stationary RICE according to manufacturer's instructions or implement a maintenance plan that provides for the maintenance and operation in a manner consistent with good air pollution control practices for minimizing emissions Install a non-resettable hour meter 	Same as area source
Testing	None	None
Existing Non-Emergency CI < 100 HP		
During Startup	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 min.	Same as area source
Work Practice Standards	<ul style="list-style-type: none"> Change oil and filter every 1,000 hours of operation or annually, whichever comes first Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first Inspect hoses and belts every 500 hours of operation or annually, whichever comes first 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	None
Operating Limitations	None	None
Demonstrating Compliance	Operate and maintain the stationary RICE according to manufacturer's instructions or implement a maintenance plan that provides for the maintenance and operation in a manner consistent with good air pollution control practices for minimizing emissions	Same as area source
Testing	None	None
Existing Emergency CI < 100 HP		
During Startup	Minimize engine idle time and engine startup to a period needed for appropriate and safe loading, not to exceed 30 min.	Same as area source
Work Practice Standards	<ul style="list-style-type: none"> Change oil and filter every 500 hours of operation or annually, whichever comes first Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first Inspect hoses and belts every 500 hours of operation or annually, whichever comes first 	Same as area source
Fuel Requirements (for engines with displacement < 30 liters/cylinder)	None	None
Operating Limitations	<ul style="list-style-type: none"> Maintenance and readiness checks limited to 100 hours/year Can operate engine for 50 hours/year for non-emergency purposes, but counted toward 100 hours above. The 50 hours cannot be used to generate income for a facility, except 15 hours/year is allowed as part of an emergency demand response program 	Same as area source
Demonstrating Compliance	<ul style="list-style-type: none"> Operate and maintain the stationary RICE according to manufacturer's instructions or implement a maintenance plan that provides for the maintenance and operation in a manner consistent with good air pollution control practices for minimizing emissions Install a non-resettable hour meter 	Same as area source
Testing	None	None

¹ Existing stationary emergency engines located at area sources that are residential, commercial, or institutional have been excluded from the final rule

² Additional requirements apply to 4SRB engines greater than or equal to 500 HP

³ Recordkeeping and reporting requirements are not included in this table.

⁴ Non-emergency > 300 HP located in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) must meet management practice requirements