

# TROUBLESHOOTING

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If a problem occurs, stop the engine immediately. Refer to the SYMPTOM column in the Troubleshooting Chart to identify the problem.

CAUTION
If any indicator fails to illuminate when the key switch is in the ON position, see your authorized Yanmar industrial engine dealer or distributor for service before operating the engine.

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CAUTION
If any indicator illuminates during engine operation stop the engine immediately. Determine the cause and repair the problem before you continue to operate the engine.

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## TROUBLESHOOTING CHART

SYMPTOM	PROBABLE CAUSE	ACTION	REFER TO
<b>Indicator Turns On - Engine Running</b>			
Engine oil pressure indicator	<ul style="list-style-type: none"> <li>• Low level of engine oil</li> <li>• Too high an oil level</li> </ul>	<ul style="list-style-type: none"> <li>• Check and adjust oil level as necessary</li> </ul>	<i>Checking Engine Oil on page 38</i>
	<ul style="list-style-type: none"> <li>• Clogged engine oil filter</li> </ul>	<ul style="list-style-type: none"> <li>• Replace engine oil filter</li> </ul>	<i>Replace Engine Oil and Engine Oil Filter on page 75</i>

# TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	ACTION	REFER TO
<b>Indicator Turns On - Engine Running</b>			
Engine coolant indicator	• Low engine coolant level	• Add engine coolant	<i>Filling Radiator With Engine Coolant on page 42</i>
	• Dirty radiator fins	• Clean the radiator fins	<i>Check and Clean Radiator Fins on page 85</i>
	• Engine coolant leaking	• See authorized Yanmar industrial engine dealer or distributor	—
	• V-belt loose or damaged	• Adjust V-belt or replace	<i>Check and Adjust Cooling Fan V-belt on page 86</i>
	• Contaminated engine coolant	• See authorized Yanmar industrial engine dealer or distributor	—
	• Faulty engine coolant pump		—
Battery Indicator	• V-belt loose or damaged	• Adjust V-belt or replace	<i>Check and Adjust Cooling Fan V-belt on page 86</i>
	• Battery failure	• Check battery condition	<i>Check Battery on page 82</i>
	• Faulty alternator	• See authorized Yanmar industrial engine dealer or distributor	—
<b>Indicator Does Not Turn ON - Key Switch is Turned to ON (OFF → ON) - Engine Not Running</b>			
	• Faulty electrical wiring or faulty indicator	• See authorized Yanmar industrial engine dealer or distributor	—
<b>Indicator Stays On - Key Switch is Turned from Start to ON (START → ON) - Engine Not Running</b>			
• Battery indicator stays ON	• Faulty alternator	• See authorized Yanmar industrial engine dealer or distributor	—
• Engine oil pressure indicator stays ON	• Faulty engine oil pressure switch		—
	• No or Low level of engine oil	• Check and adjust oil level as necessary	<i>Checking Engine Oil on page 38</i>
	• Clogged engine oil filter	• Replace engine oil filter	<i>Replace Engine Oil and Engine Oil Filter on page 75</i>
<b>Engine Does Not Start</b>			
• Starter motor operates but engine does not start	• No diesel fuel	• Refuel and prime fuel system	<i>Filling The Fuel Tank on page 34</i>
	• Air in fuel system	• Prime fuel system	<i>Priming The Fuel System on page 36</i>
	• Improper diesel fuel	• Replace with recommended diesel fuel	<i>Diesel Fuel Specifications on page 33</i>
	• Clogged fuel filter	• Replace fuel filter	<i>Replace Fuel Filter on page 89</i>
	• Poor fuel injection	• See authorized Yanmar industrial engine dealer or distributor	—
	• Compressed air leakage from intake / exhaust valves		—
	• Faulty engine stop solenoid		—

SYMPTOM	PROBABLE CAUSE	ACTION	REFER TO
<ul style="list-style-type: none"> <li>• Starter motor does not operate or rotates too slowly (engine can be turned manually)</li> </ul>	<ul style="list-style-type: none"> <li>• Battery needs charging</li> </ul>	<ul style="list-style-type: none"> <li>• Check electrolyte, recharge</li> </ul>	<i>Check Battery on page 82</i>
	<ul style="list-style-type: none"> <li>• Faulty cable connection at battery terminals</li> </ul>	<ul style="list-style-type: none"> <li>• Clean terminals, retighten</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Faulty starter switch</li> </ul>	<ul style="list-style-type: none"> <li>• See authorized Yanmar industrial engine dealer or distributor</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Faulty starter motor</li> </ul>		—
<ul style="list-style-type: none"> <li>• Engine cannot be manually turned</li> </ul>	<ul style="list-style-type: none"> <li>• Inner parts seized or damaged</li> </ul>		—
<b>White or Black Exhaust Smoke</b>			
<ul style="list-style-type: none"> <li>• Black exhaust smoke</li> </ul>	<ul style="list-style-type: none"> <li>• Engine overloaded</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce load</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Clogged air cleaner element</li> </ul>	<ul style="list-style-type: none"> <li>• Clean element or replace</li> </ul>	<i>Clean Air Cleaner Element on page 87</i>
	<ul style="list-style-type: none"> <li>• Improper diesel fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with recommended diesel fuel</li> </ul>	<i>Diesel Fuel Specifications on page 33</i>
	<ul style="list-style-type: none"> <li>• Faulty spraying of fuel injection</li> </ul>	<ul style="list-style-type: none"> <li>• See authorized Yanmar industrial engine dealer or distributor</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Excessive intake / exhaust valve clearance</li> </ul>		—
<ul style="list-style-type: none"> <li>• White exhaust smoke</li> </ul>	<ul style="list-style-type: none"> <li>• Improper diesel fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with recommended diesel fuel</li> </ul>	<i>Diesel Fuel Specifications on page 33</i>
	<ul style="list-style-type: none"> <li>• Faulty spray pattern of fuel injection</li> </ul>	<ul style="list-style-type: none"> <li>• See authorized Yanmar industrial engine dealer or distributor</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Fuel injection timing delay</li> </ul>		—
	<ul style="list-style-type: none"> <li>• Engine burning oil</li> </ul>		—

### TROUBLESHOOTING INFORMATION

If your engine does not operate properly, refer to the troubleshooting chart or consult your authorized Yanmar industrial engine dealer or distributor.

Supply the authorized Yanmar industrial engine dealer or distributor with the following information:

- Model name and serial number of your engine
- The driven machine type (tractor, generator, skid steer loader), manufacturers name, model and serial number
- How long the engine has been in service (the number of engine hours or the number of calendar months)
- Operating conditions when problem occurs:
  - ◆ Engine rpm
  - ◆ Color of exhaust smoke
  - ◆ Type of diesel fuel
  - ◆ Type of engine oil
  - ◆ Any abnormal noises or vibration
  - ◆ Operating environment such as high altitude or extreme ambient temperatures, etc.
- Engine maintenance history and previous problems
- Other factors that contribute to the problem