

FACTS ABOUT

Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles

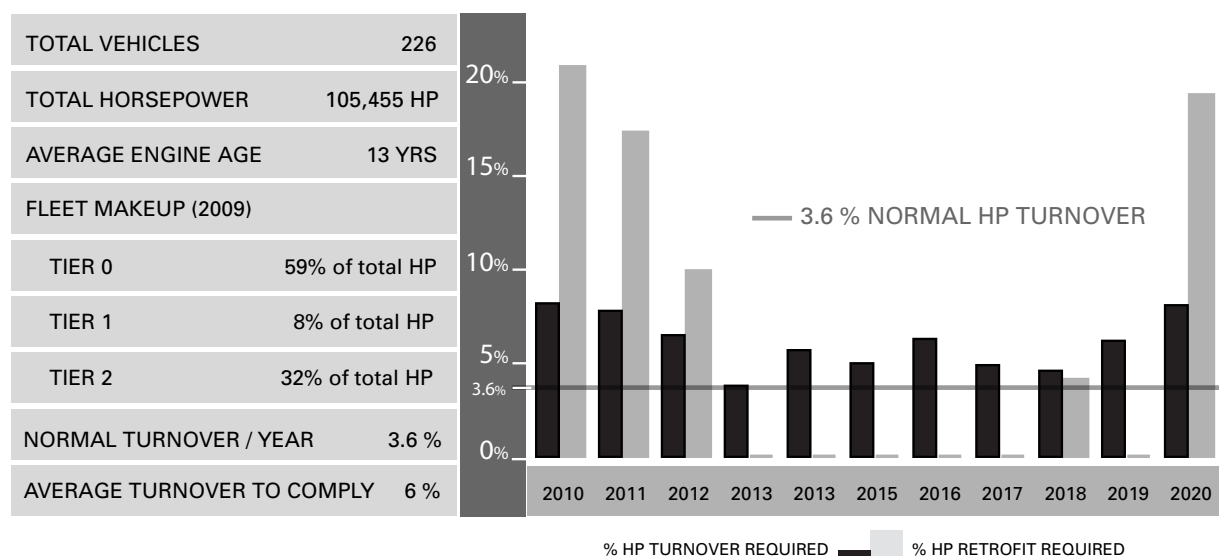
Compliance examples for fleets

On July 26, 2007, the California Air Resources Board approved a regulation to reduce emissions from existing off-road diesel vehicles used in California. This fact sheet shows possible compliance paths for three example fleets, all of which result in the examples being fully compliant with the regulation. The regulation requires fleets to either meet a set of fleet average targets for oxides of nitrogen (NO_x) and particulate matter (PM) or to turn over and apply exhaust retrofits to a certain percent of the fleets horsepower (hp) per year. The first compliance date for large fleets is 2010, and for small fleets is 2015. For further information on the regulation, please visit our website at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>.

FLEET EXAMPLE 1, an older large fleet

Emission standards for new off-road engines have become progressively more stringent over time. The dirtiest or “uncontrolled” engines are classified as Tier 0, while higher tier engines are cleaner. Example Fleet 1 is an older large fleet made up of a majority of Tier 0 engines.

The table below shows the makeup of Example Fleet 1 by Tier and other characteristics starting in the year 2009. The graph illustrates one possible compliance strategy that Fleet 1 could follow to meet the requirements of the regulation.

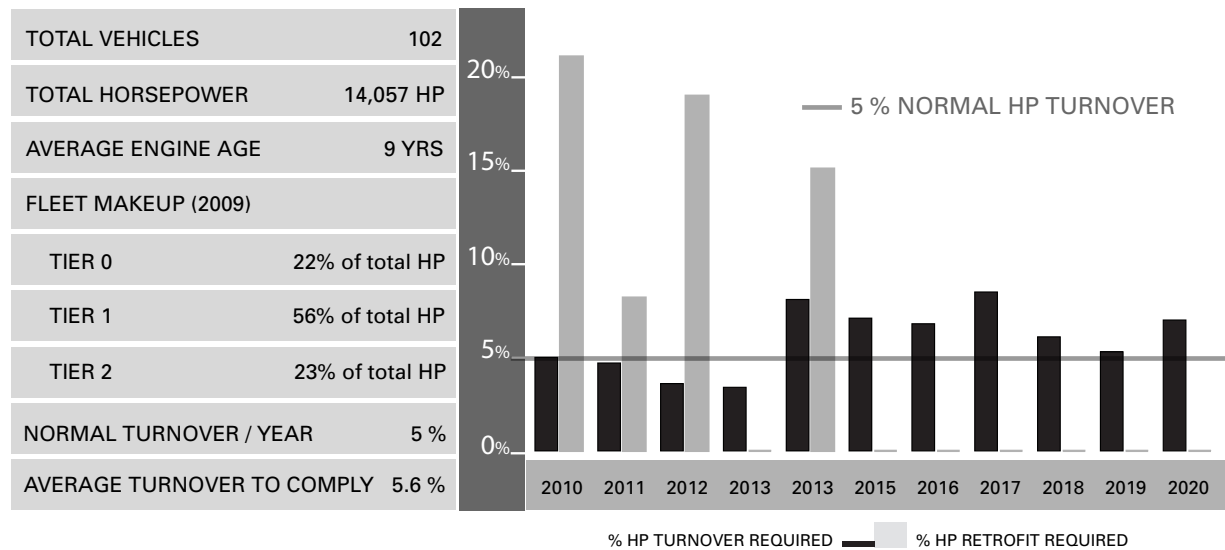


In the example above, Fleet 1 would increase its normal annual turnover from 3.6 percent per year to an average of about 6 percent per year and install exhaust retrofits in a number of years.

By taking these actions, the fleet would meet the PM targets by 2011 and the NO_x targets by 2012. By 2020, about 70 percent of the fleet’s horsepower would have been turned over (versus 43 percent that would have turned over due to normal turnover), and 70 percent of the fleet’s horsepower would have had an exhaust retrofit installed.

EXAMPLE FLEET 2, a large newer fleet

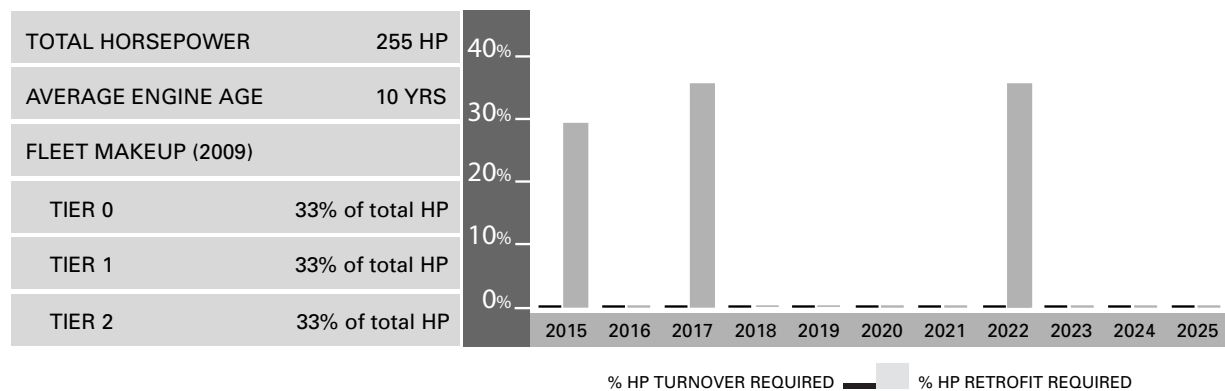
Fleet 2, is a younger large fleet made up of mostly Tier 1 and 2 vehicles with a faster normal turnover rate than the first example. The table below shows the makeup of this fleet starting in the year 2009 and one possible compliance strategy that could be followed to meet the requirements of the regulation.



The example above shows the compliance actions that fleet 2 could take to meet the regulation requirements. Fleet 2 could increase its normal turnover to about 5.6 percent per year and install exhaust retrofits. The fleet would meet the NOx targets in every year and would meet the PM targets by 2011. By 2020, 66 percent of the fleets horsepower would have been turned over (versus 60 percent that would have turned over due to natural turnover), and 63 percent of the fleets horsepower would have been retrofitted

EXAMPLE FLEET 3, a small fleet

The tables below summarize the characteristics starting in 2009 of a small example fleet.



This example shows the compliance actions fleet 3 would take. Because small fleets are exempt from the NOx part of the regulation, fleet 3 only has to install PM exhaust retrofits. By 2022, the small fleet would have retrofitted all its horsepower.

For additional general information

Please contact ARB's diesel hotline at (866) 6DIESEL (634-3735).