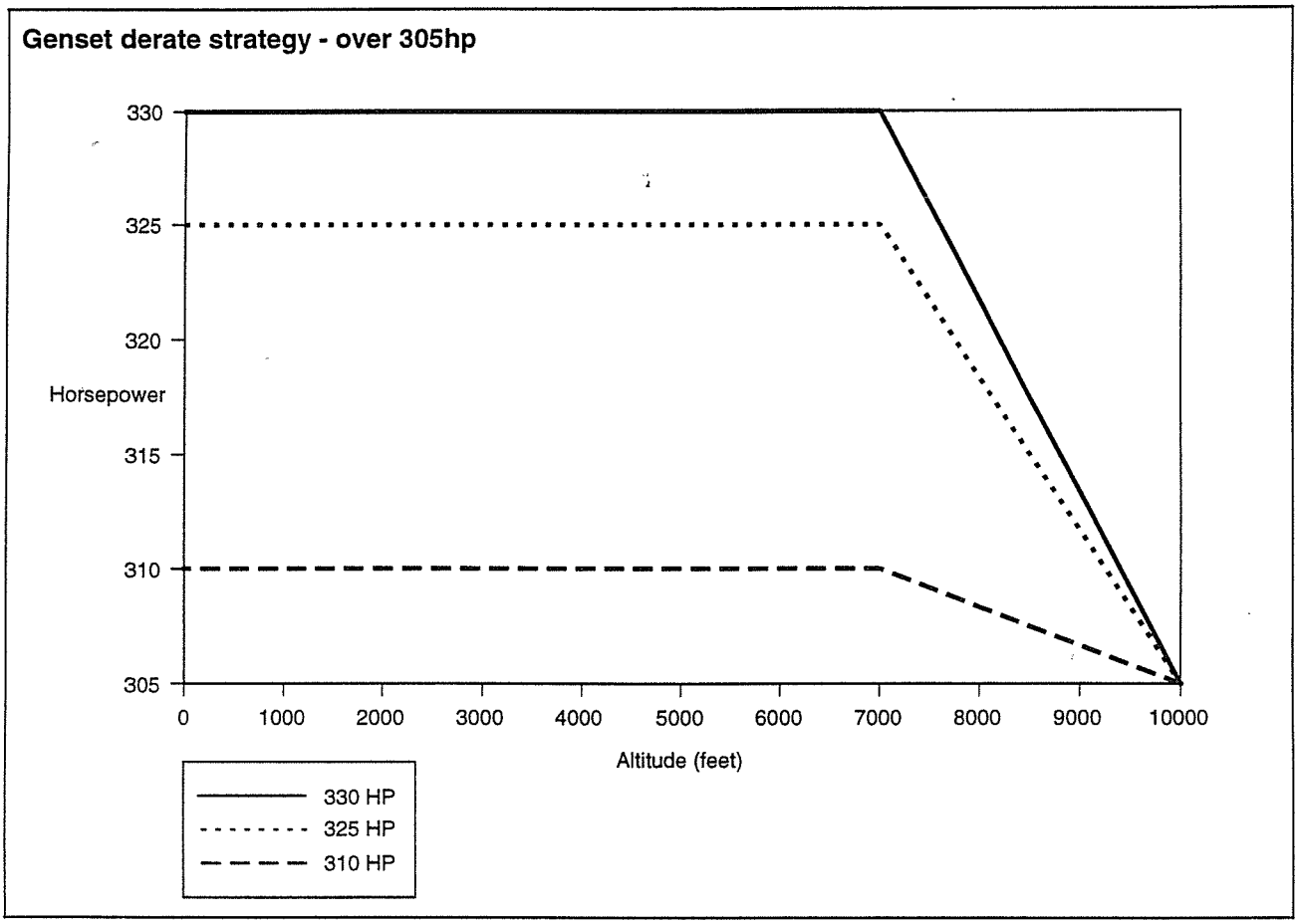
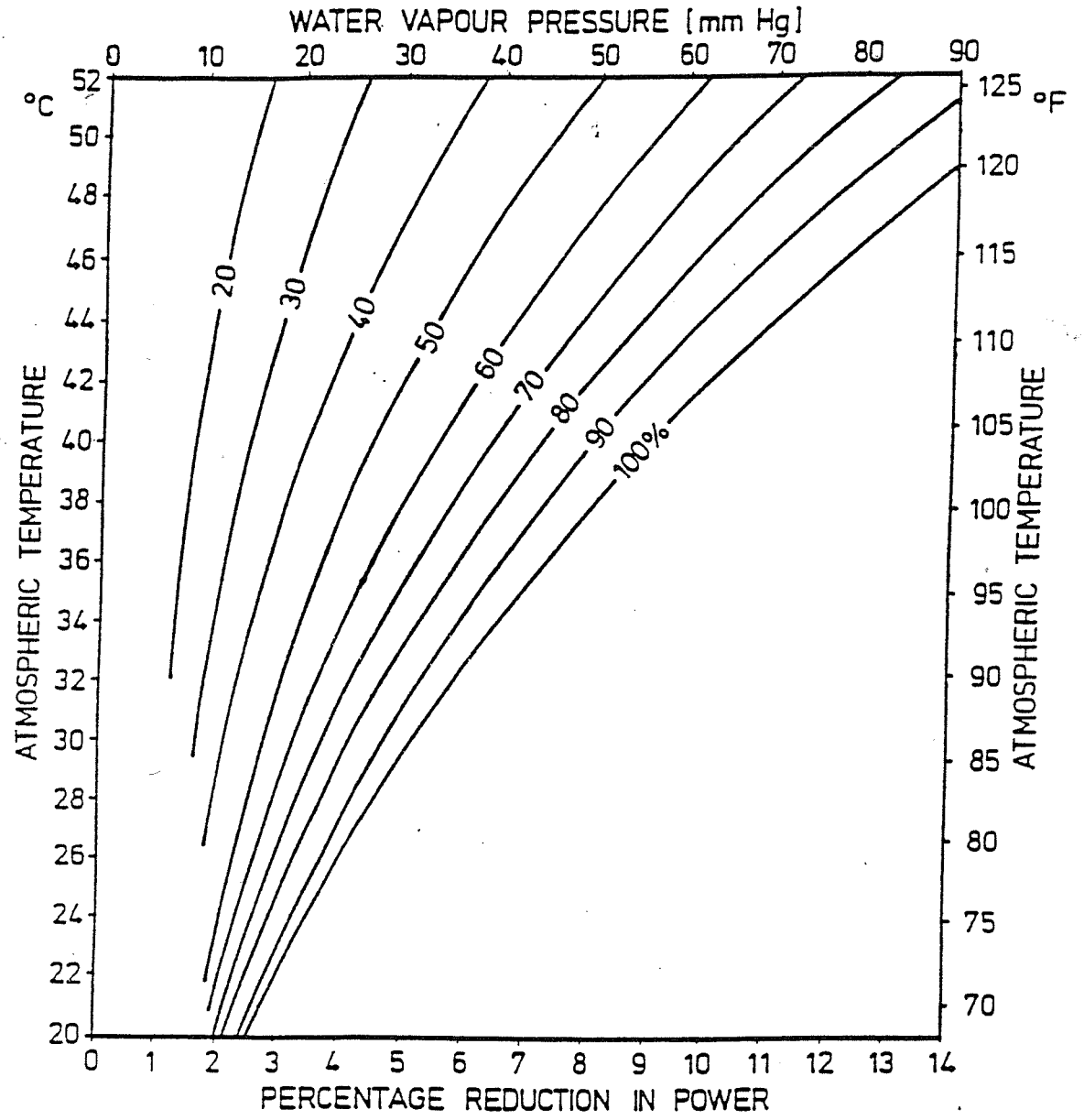
Genset Derate Strategy - over 305hp



***Humidity,** curve 3892/A*



* NOTE : When estimating the percentage reduction in power due to humidity, the relative humidity must be coupled with the ATMOSPHERIC AIR TEMPERATURE, and not the inlet air temperature which might be locally heated. The effect of inlet air temperature on power output must be considered separately using diagram 3893A or 5328
Where humidity is expressed in terms of water vapour pressure, the percentage reduction in power can be read directly from the chart.

Engine operating conditions

Allowances for engine driven auxiliary equipment

If the engine operates in the ambient conditions shown on the power curve, the only allowances which must be made are for the power used by accessories such as the fan and the alternator. The amount of power used by accessories driven by the engine must be decided so that the net horsepower available at the flywheel can be found.

De-rating

If the engine operates in ambient conditions other than the conditions shown on the power curve, then suitable allowances must be made for any change in inlet air temperature, barometric pressure or humidity.

1 Inlet air temperature

High inlet air temperature to the engine can cause loss of power and heat problems with the cooling system, the lubricating oil and hydraulic oil systems. This may be either due to high ambient temperatures, or because the engine is being used inside a building or structure of a machine which requires more air flow.

For turbocharged engines, the effect will be decided by the amount of turbocharger boost. As a general guide, the power loss for non-charge cooled turbocharged engines is 2% for every 10°C (18°F) rise above the reference temperature.

2 Barometric pressure

Within the normal range of changes at sea level, the loss of power is insignificant.

3 Altitude

For engines rated up to 305 hp there will be no loss of power at altitudes of up to 3048m (10,000 ft).

For engines rated over 305 hp a derate will be applied between 2134 m (7,000 ft) and 3048 m (10,000 ft). See page 6.13.

4 Humidity

The amount by which the rating will be reduced because of humidity, will be according to the percentage humidity and the ambient temperature (not the inlet air temperature).

Curve 3892A shows the loss of power due to humidity at different ambient temperatures; see page 6.14.

5 Fuel oil - specific gravity

For the effects on the fuel oil from changes in specific gravity, see the graph on page 6.16.

6 Fuel oil temperature

The temperature of the fuel oil entering the injection system is controlled by the operating temperature of the engine and therefore engine performance is not affected.

Engine ratings given by Perkins are corrected to the reference conditions shown in the rating standards.