```
function data = Ambient_Correction( data )
% This function applies correction factors to the measured data according
% to section S6.7 of the final rule.

%-------------------------------------------------------------------------
% Correct Overall Levels
%-------------------------------------------------------------------------
% See Table 8 of the final rule

for ink = 1 : length( data.vehicleOverallLevels_dBA )
        delta = data.vehicleOverallLevels_dBA ( ink ) - data.ambientOverallLevels_dBA ( ink ) ;
        if delta > 10
            data.vehicleOverallLevels_dBA ( ink ) = data.vehicleOverallLevels_dBA ( ink );
        elseif delta > 8 && delta <= 10
            data.vehicleOverallLevels_dBA ( ink ) = data.vehicleOverallLevels_dBA ( ink )- 0.5;
        elseif delta > 6 && delta <= 8
            data.vehicleOverallLevels_dBA ( ink ) = data.vehicleOverallLevels_dBA ( ink ) - 1.0;
        elseif delta > 4.5 && delta <= 6
            data.vehicleOverallLevels_dBA ( ink ) = data.vehicleOverallLevels_dBA ( ink ) - 1.5;
        elseif delta > 3 && delta <= 4.5
            data.vehicleOverallLevels_dBA ( ink ) = data.vehicleOverallLevels_dBA ( ink ) - 2.5;
        elseif delta <= 3
            data.vehicleOverallLevels_dBA ( ink ) = -9999;
        end
end

%-------------------------------------------------------------------------
% Correct One-third Octave Bands
%-------------------------------------------------------------------------
% See Table 9 of the final rule

for ink = 1 : size( data.vehicleFOBLevels_dBA, 1 )
    for lead = 1 : size( data.vehicleFOBLevels_dBA, 2 )
        delta = data.vehicleFOBLevels_dBA( ink, lead ) - data.ambientFOBLevels_dBA( ink, lead );
        if delta > 6
            data.vehicleFOBLevels_dBA( ink, lead ) = data.vehicleFOBLevels_dBA( ink, lead );
        elseif delta > 4.5 && delta <= 6
            data.vehicleFOBLevels_dBA( ink, lead ) = data.vehicleFOBLevels_dBA( ink, lead ) - 1.5;
        elseif delta > 3 && delta <= 4.5
            data.vehicleFOBLevels_dBA( ink, lead ) = data.vehicleFOBLevels_dBA( ink, lead ) - 2.5;
        elseif delta <= 3
            data.vehicleFOBLevels_dBA( ink, lead ) = -9999;
        end
    end
end
```