```matlab
function [ vars ] = compressor_var( vars )

P03_over_P02 = vars.P_ratio_overall;
P013_over_P02 = vars.P_ratio_fan;
P03_over_P013 = P03_over_P02 ./ P013_over_P02;
vars.P_03 = vars.P_013 .* P03_over_P013;

vars.T_03s = var_cp(vars.T_013,P03_over_P013);
vars.T_03 = var_cp_comp(vars.T_013,vars.T_03s,vars.eta_comp);

end
```

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