

<u>l-In a Diesel engine:</u>

It is the compression which heats the air to a favorable temperature which triggers the combustion of the diesel:

 $C_{21}H_{44} + 43O_2 + (heat by compression) \rightarrow explosive combustion + 21CO_2 + 22H_2O_3$

II-In the atmosphere:

a-Water vapor decomposition:

Clouds or rainwater never formed directly through the water vapor from evapotranspiration.

H2O molecules decompose squarely on their ascent to a certain altitude into $H_2 \nearrow$ and $O \nearrow$ as simple and free gaseous bodies by the action of the solar ultraviolet rays.

- * Light hydrogen escapes more at altitude
- * Relatively heavier oxygen remains.

We can no longer speak of water vapor at this stage.

b-Compression-Ionization:

The ascending and descending air currents constitute 2 opposing mechanical forces. The air is compressed or self-compressed. This compression generates friction giving rise to heat which ionizes the molecules and atoms present in this area., hydrogen ionizes positively and oxygen is electronegative by nature.

c-Combustion or Synthesis:

At a favorable air compression rate, hydrogen burns in oxygen, this reaction is explosive and gives rise to water (clouds and rain).

 $8H2 + 4O2 + (heat by compression) \rightarrow explosive combustion + 8H2O$