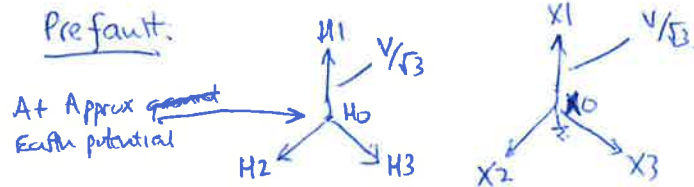


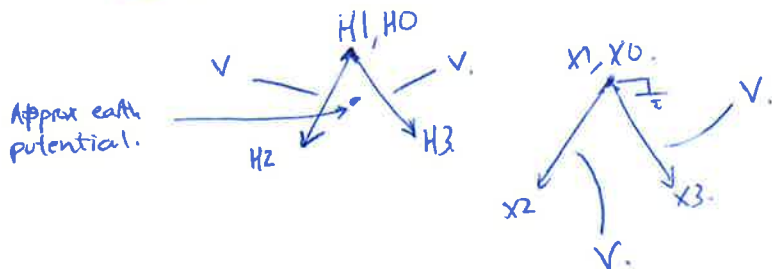
Star-star Connected Transformers

(assume no phantom delta's - if not, all bets are off!).

① Earthed X_0 , Unearthed H_0 .



Fault on X_1



Note

H_2-H_0 and H_3-H_0 shift from being at $V/\sqrt{3}$ to V , and will likely saturate in case 1. ~~to~~

Case

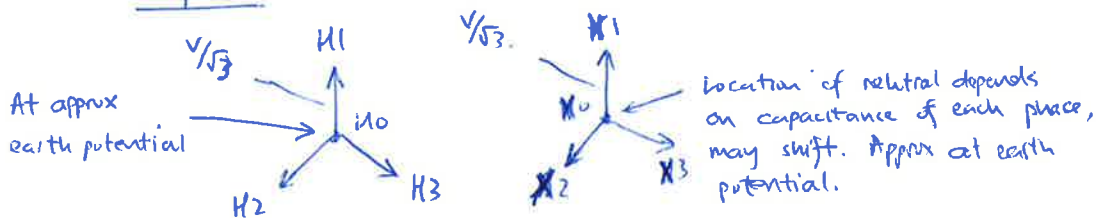
X_1 has collapsed, X_2-X_0 and X_3-X_0 are at $\sqrt{3}$ higher voltage than normal (depending on saturation), ~~and phase~~

~~neutral connection is important~~

Phase-phase voltages are maintained, unless there is saturation.

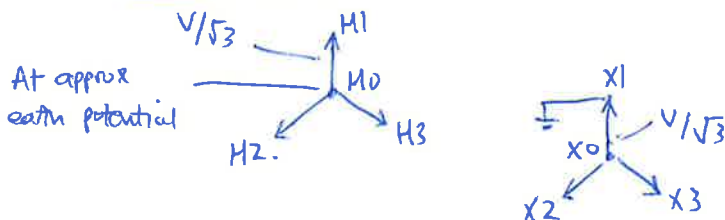
② Unearthed X_0 , Unearthed H_0 .

Prefault



Location of neutral depends on capacitance of each phase, may shift. Approx at earth potential.

Fault on X_1



Note

HV side is relatively unaffected.

LV side shifts the neutral, but otherwise unaffected.

Risk of arcing ground fault - very destructive; severe overvoltages