In solution to HW 2 Prob. 1.4

Why is there no 3x conversion to alpha-v (coming from dv/dt)p
relation) from alpha-l (supplied in problem)?

You are correct, the thermal expansion coefficient that is needed in
the final expression is alpha_V not alpha_L.

You can find alpha_V=3*alpha_L...

For a more detailed derivation of this relationship, please go to

Thermal Expansion

I will correct the solutions later...