

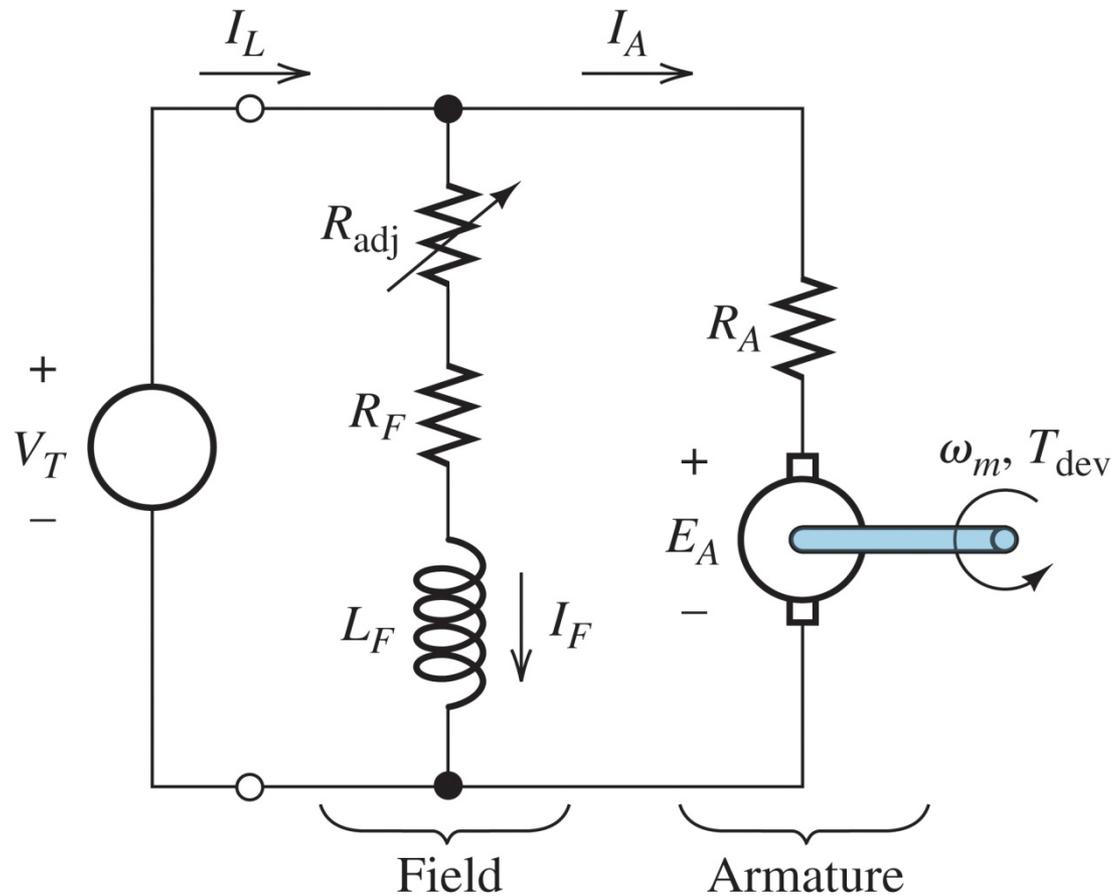
EELE 250: Circuits, Devices, and Motors

Electric Motors

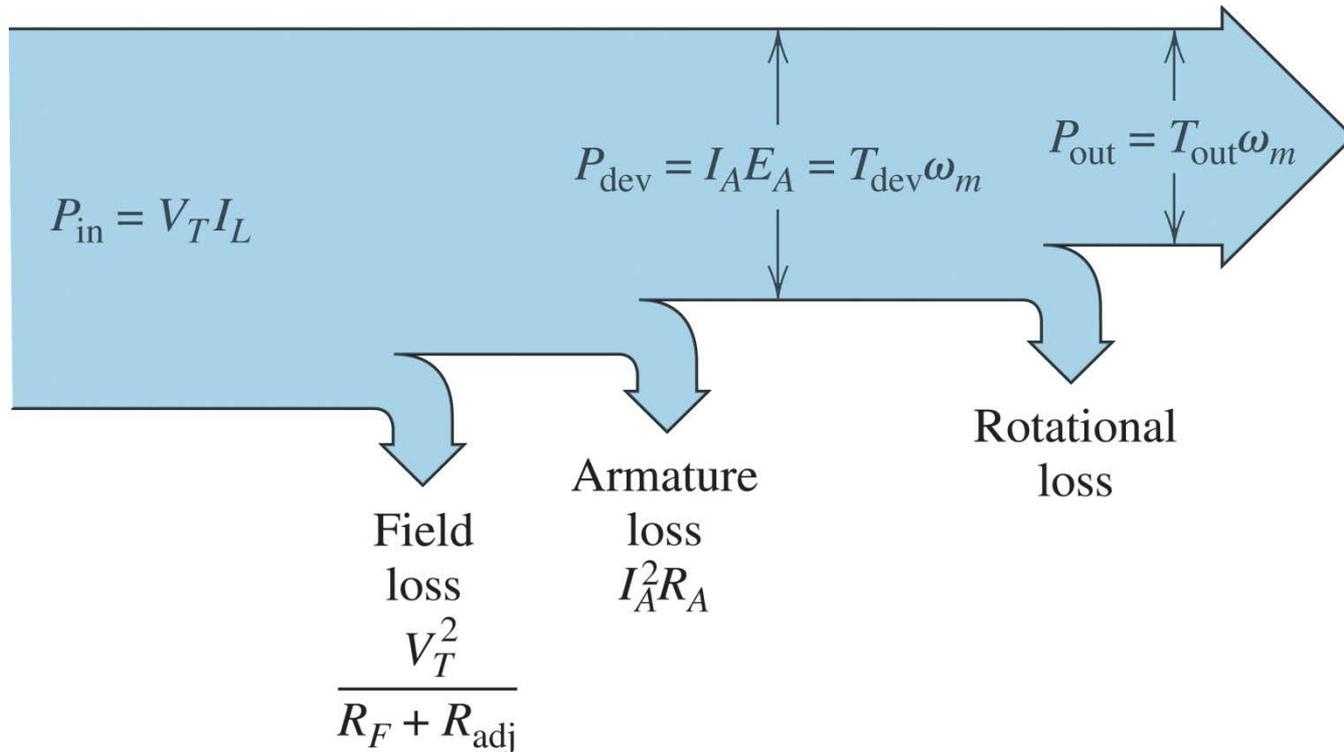
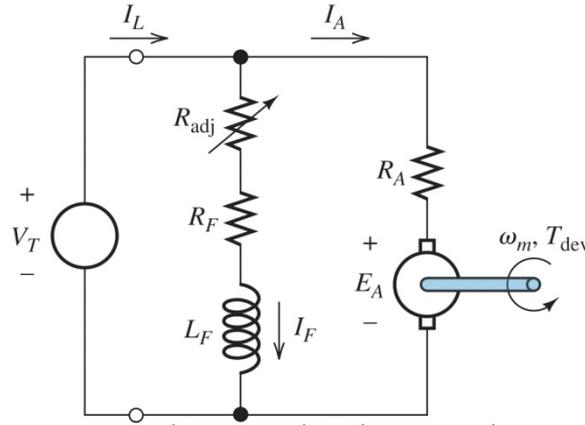
Assignment Reminder

- No lab this week or next week.
- Lab #9 (last) will be the last week of class.
- Quiz #9 will be posted later this week (due by class time on 11/25/13).
- Final Exam on Tuesday, December 15, 8AM
 - Comprehensive coverage
 - Three handwritten sheets of notes
 - Calculator and pen/pencil

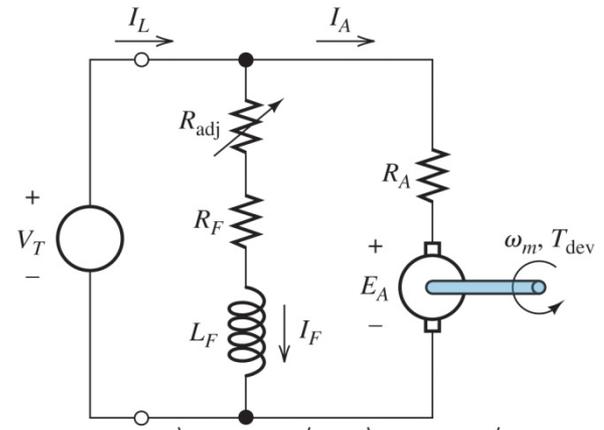
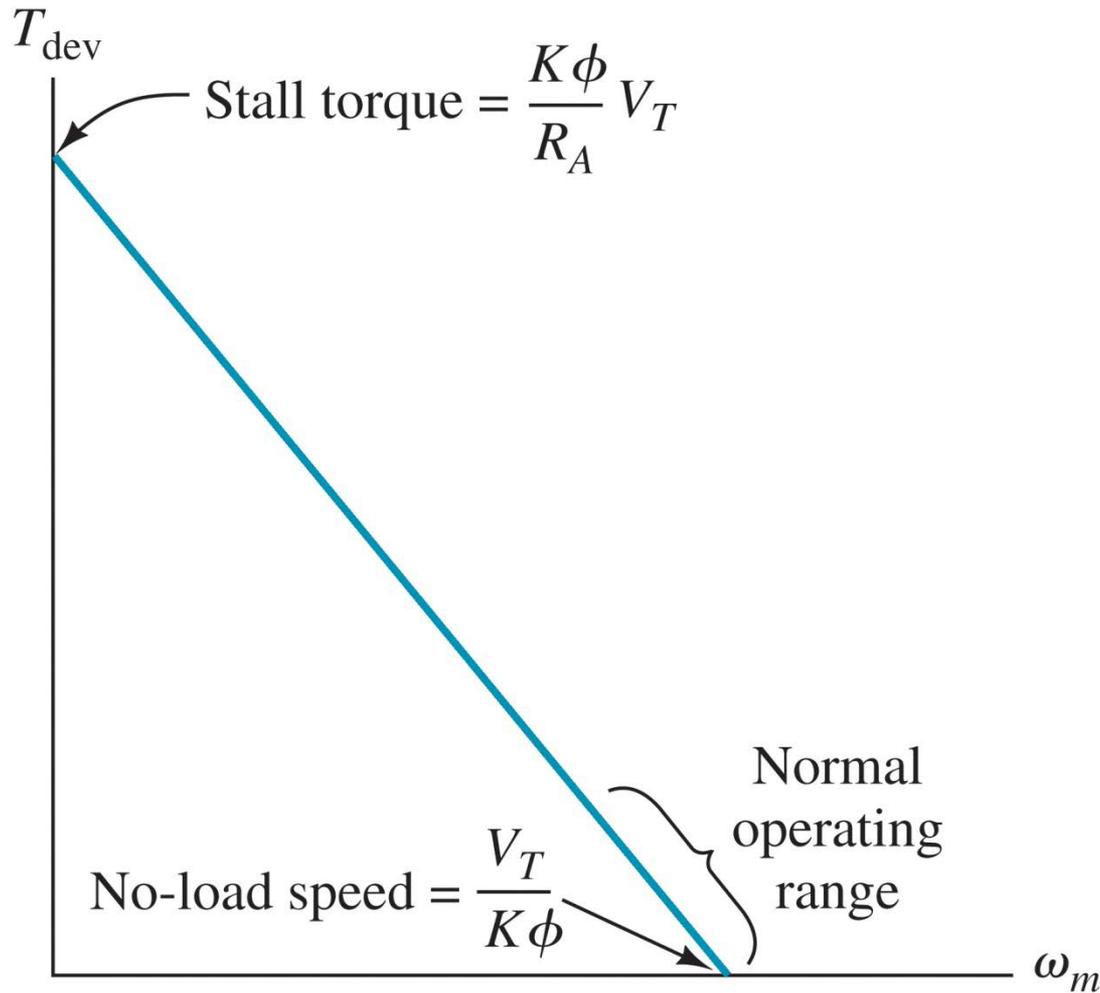
DC Motor: Shunt Connection



Shunt Connection (cont.)

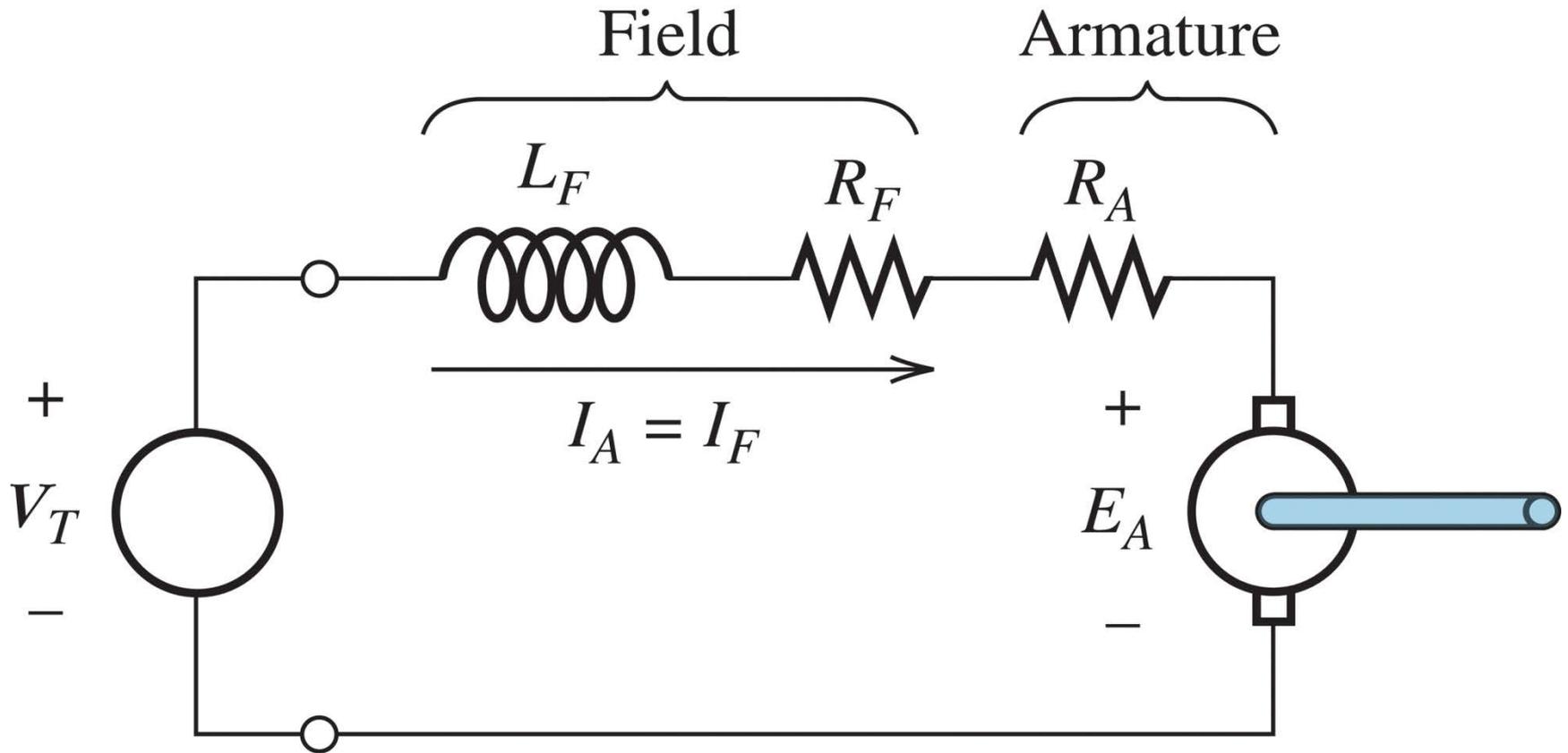


Shunt Connection (cont.)

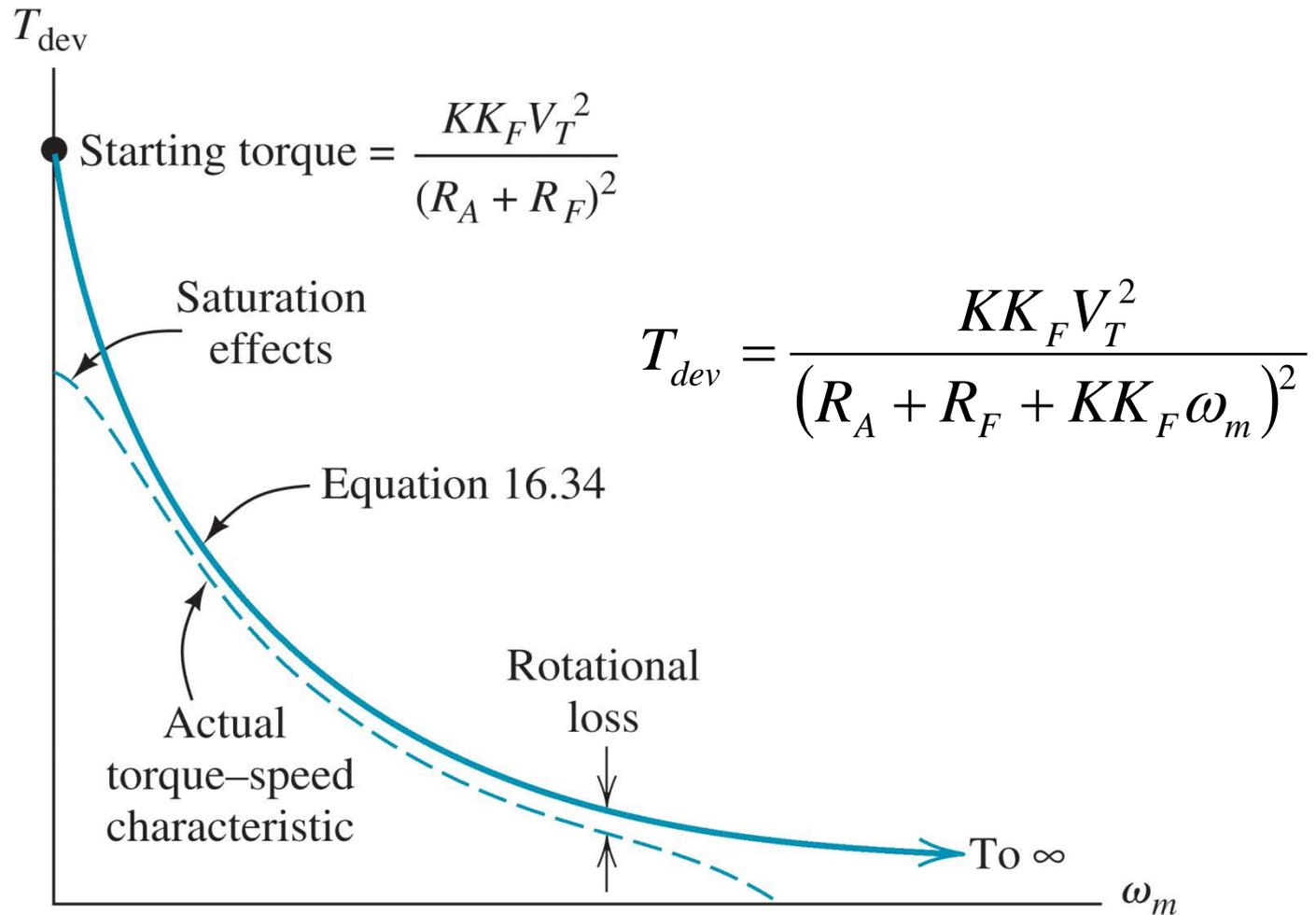


Also:
Separately-excited
and
Permanent Magnet
Motors

DC Motor: Series Connection



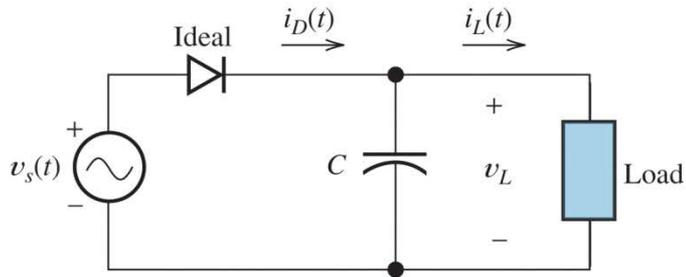
Series Connection (cont.)



Converting AC to DC

- Rectifier concept: diodes
- Half-wave rectifier
- Full-wave rectifier

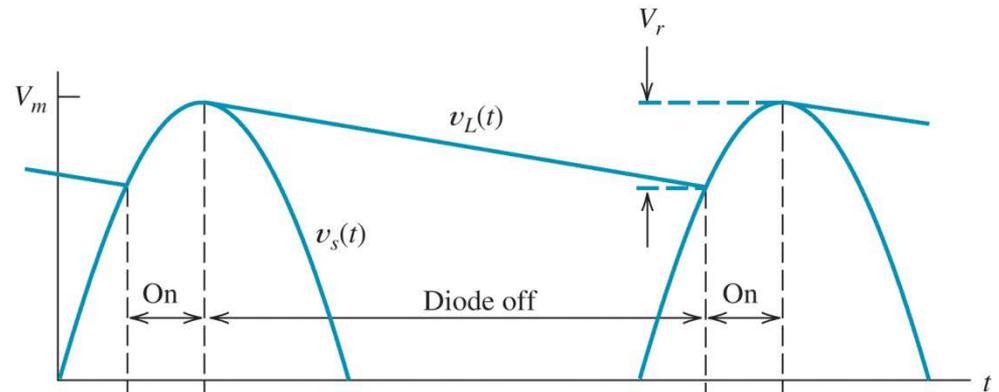
Half-wave rectifier



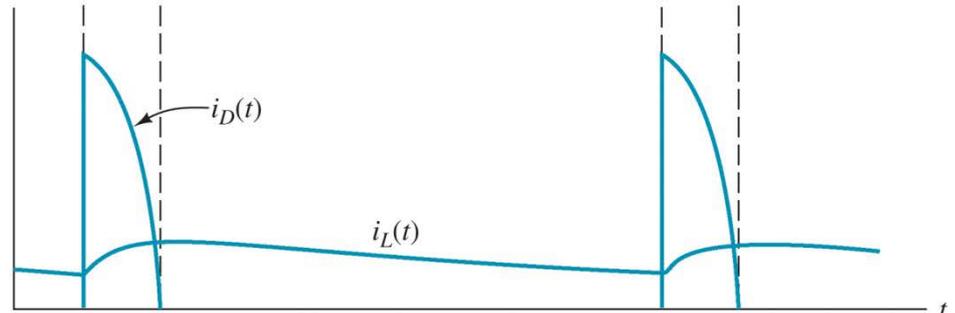
(a) Circuit diagram

Diode conducts when $v_s(t)$ is greater than voltage of capacitor.

When diode is "off," capacitor supplies current to load.



(b) Voltage waveforms



(c) Current waveforms

Full-wave rectifier

