

General Thermodynamic Problem Solving Approach

- For solving most engineering problems using thermodynamics, can use the following recipe:
 1. Draw picture of system that includes control surface
 2. List “givens” (properties, constraints,...)
 3. List assumptions (initial assumptions or as needed)
 4. Apply basic principles
 - “Conservation” Laws (mass, momentum, energy, entropy)
 - State Equations (property relations: analytic, tables, graphs)
 - often useful to draw TD process on appropriate diagrams (p-v, T-v, etc.)
 5. Analyze results: make “sense”?