Incorrect coupling and uncoupling can be very dangerous, and can lead to damaged equipment and/or cargo. Knowing how to couple and uncouple correctly is basic to safe operation of combination vehicles. There are differences between different rigs, so learn the details of coupling and uncoupling the type of equipment you operate.

**Coupling Tractor-Semitrailers:**

**Step 1. Inspect Fifth Wheel**

* Check for damaged/missing parts, and that mounting to tractor is secure, no cracks in frame, etc.
* Be sure that the fifth wheel plate is greased as required. Failure to keep the fifth wheel plate lubricated could cause steering problems because of friction between the tractor and trailer.
* Check if fifth wheel is in proper position for coupling.
  + Fifth-wheel tilted down toward rear of tractor and locking jaws open.
  + Safety unlocking handle in the automatic lock position.
  + If you have a sliding fifth wheel, make sure it is locked.
  + Make sure the trailer kingpin is not bent or broken.

**Step 2. Inspect Area and Chock Wheels**

* Make sure area around the vehicle is clear.
* Be sure trailer wheels are chocked or spring brakes are on.
* Check that cargo (if any) is secured against movement due to tractor being coupled to the trailer.

**Step 3. Back Slowly**

* Put the tractor directly in front of the trailer. (Never back under the trailer at an angle because you might push the trailer sideways and break the landing gear.)
* Back until fifth wheel just touches the trailer. Do not hit the trailer. Put on the parking brake

**Step 4. Check Trailer Height**

* Trailer should be low enough that it is raised slightly by the tractor when tractor is backed under it.
* Raise or lower trailer as needed. *Always* use low range gears when raising/lowering a loaded trailer.
  + If the trailer is too low, the tractor may strike and damage the trailer nose;
  + If the trailer is too high, it may not couple correctly.

**Step 5. Connect Air Lines to Trailer**

* Check glad hand seals and connect tractor emergency and service airlines to trailer glad hands.
* Be sure air lines are safely supported so they are not crushed or caught while backing under trailer.

**Step 6. Supply Air to Trailer**

* From cab, push in "air supply" knob or move tractor protection valve control from the "emergency" to the "normal" position to supply air to the trailer brake system. Wait until air pressure is normal.
* Check brake system for crossed air lines. (Shut engine off so you can hear the brakes.)
* Apply and release trailer brakes and listen for sound of trailer brakes being applied and released. You should hear the brakes move when applied and air escape when the brakes are released.
* Check air brake system pressure gauge for signs of major air loss.
* When sure trailer brakes are working, start engine, and make sure air pressure is up to normal; then pull out "air supply" knob or move tractor protection valve control from "normal" to "emergency."

**Step 7. Back Under Trailer**

* Use lowest reverse gear, and back tractor slowly under trailer to avoid hitting the kingpin too hard.
* Stop when the kingpin is locked into the fifth wheel.

**Step 8. Secure Vehicle**

* Put transmission in neutral, and put parking brakes on.
* Shut off engine and take key with you so someone else won't move truck while you are under it.

**Step 9. Inspect Coupling**

* Use a flashlight, if necessary. If the coupling isn't right, do not drive the coupled unit; ***get it fixed.***
* Make sure there is no space between upper and lower fifth wheel. If there is space, something is wrong (kingpin may be on top of the closed fifth wheel jaws and trailer will come loose very easily).
* Go under trailer and look into the back of the fifth wheel. Make sure the fifth wheel jaws have closed around the shank of the kingpin.
  + Check that the locking lever is in the "lock" position, and that the safety latch is in position over locking lever. (On some fifth wheels the catch must be put in place by hand.)

**Step 10. Connect the Electrical Cord and Check Air Lines**

* Plug the electrical cord into the trailer and fasten the safety catch.
* Check both airlines and electrical line for signs of damage.
* Make sure air and electrical lines will not hit any moving parts of vehicle.

**Step 11. Raise Front Trailer Supports (Landing Gear)**

* Use low gear range (if so equipped) to begin raising the landing gear. Once free of weight, switch to the high gear range, and raise the landing gear all the way up.
  + Never drive with landing gear only part way up as it may catch on railroad tracks or other things.
* After raising landing gear, secure the crank handle safely.
* When full weight of trailer is resting on tractor:
  + Check for enough clearance between rear of tractor frame and landing gear. (When tractor turns sharply, it must not hit landing gear.)
  + Check that there is enough clearance between the top of the tractor tires and the nose of trailer.

**Step 12. Remove Trailer Wheel Chocks**

* Remove and store wheel chocks in a safe place.

**Uncoupling Tractor-Semitrailers:**

**Step 1. Position Rig**

* Make sure surface of parking area can support weight of trailer.
* Have tractor lined up with the trailer (Pulling out at an angle can damage landing gear).

**Step 2. Ease Pressure on Locking Jaws**

* Shut off trailer air supply to lock trailer brakes.
* Ease pressure on fifth wheel locking jaws by backing up gently (helps release locking lever).
* Put tractor parking brake on while pushing against kingpin (holds rig with pressure off locking jaws).

**Step 3. Chock Trailer Wheels**

* Chock the trailer wheels. (Without chocks, the trailer could move.)

**Step 4. Lower the Landing Gear**

* If trailer is empty, lower the landing gear until it makes firm contact with the ground.
* If trailer is loaded, after the landing gear makes firm contact with the ground, turn crank in low gear a few extra turns. This will lift some weight off the tractor. (Do not lift trailer off the fifth wheel.) This will make it easier to unlatch fifth wheel, and easier to couple next time.

**Step 5. Disconnect Air Lines and Electrical Cable**

* Disconnect air lines and electrical connection from trailer.
  + Connect airline glad hands to dummy couplers at back of cab or couple them together, and hang electrical cable with plug down to prevent moisture from entering it.
  + Make sure lines are supported so they won't be damaged while driving the tractor.

**Step 6. Unlock Fifth Wheel**

* Raise the release handle lock and pull the release handle to "open" position.
  + Keep legs and feet clear of the tractor wheels to avoid serious injury if the vehicle moves.

**Step 7. Pull Tractor Partially Clear of Trailer**

* Pull tractor forward until fifth wheel comes out from under the trailer.
* Stop tractor with frame under trailer (prevents trailer from falling to the ground if landing gear collapses or sinks).

**Step 8. Secure Tractor**

* Apply parking brake and place transmission in neutral.

**Step 9. Inspect Trailer Supports**

* Make sure ground is supporting trailer, and that the landing gear is not damaged.

**Step 10. Pull Tractor Clear of Trailer**

* Release parking brakes. Check the area and drive tractor forward until it clears.