National Aeronautics and Space Administration

Lunar Heavy Cargo and Crew Launch Vehicles

The lunar heavy cargo launch vehicle (left) uses a pair of longer solid rocket boosters and five core stage engines to put up to 125 metric tons in orbit. This versatile system will be used to carry cargo or put the components needed to go to the moon and Mars into orbit. Eventually, the heavy-lift rocket could be modified to carry crew as well. In the meantime, astronauts will launch on a different rocket made up of a single space shuttle solid rocket booster, with a second stage powered by a J-2X engine like those used on Apollo (right). An escape rocket on top of the capsule could quickly blast the crew away from the rocket if a problem developed during launch.

Credit: NASA