**MW Cruise Control System Test Plan**

#### At power up, initial state not engaged

Total simulation time = 2 sec

Inputs:

* Set all inputs to zero at time = 0

Expected output:

* engaged false for all time
* tspeed (0) for all time

#### For the first enable, not engaged

Total simulation time = 2 sec

Inputs:

* Set all inputs to zero at time = 0
* Set CruiseOnOff to “on” at time = 1

Expected output:

* engaged false for all time
* tspeed (0) for all time

#### Transition to disengage with disable

Total simulation time = 2 sec

Inputs:

* Set Speed to (50) all other inputs to zero at time = 0
* Set CruiseOnOff to (true) at time = 0.5
* Set CoastSetSw to (true) at time = 1.0
* Set CoastSetSw to (false) at time = 1.1
* Set CruiseOnOff to (false) at time = 1.5

Expected output:

* engaged (false) and tspeed (0) for 0 <= time <1.0
* engaged (true) and tspeed (50) for 1.0 <= time < 1.5
* engage (false) and tspeed (0) for 1.5<= time <= end

#### First transition from power up only with CoastSetSw

Total simulation time = 2 sec

Inputs:

* Set Speed to (50) all other inputs to zero at time = 0
* Set CruiseOnOff to (true) at time = 0.5
* Set CoastSetSw to (true) at time = 1.0
* Set CoastSetSw to (false) at time = 1.1

Expected output:

* engaged (false) and tspeed (0) for 0 <= time <1.0
* engaged (true) and tspeed (50) for 1.0 <= time < end

#### First transition from power up not AccelResSw

Total simulation time = 2 sec

Inputs:

* Set Speed to (50) all other inputs to zero at time = 0
* Set CruiseOnOff to (true) at time = 0.5
* Set AccelResSw to (true) at time = 1.0
* Set AccelResSw to (false) at time = 1.1

Expected output:

* engaged (false) and tspeed (0) for 0 <= time < end

#### Transition from engaged to disengaged with Brake

Total simulation time = 2 sec

Inputs:

* Set Speed to (50) all other inputs to zero at time = 0
* Set CruiseOnOff to (true) at time = 0.5
* Set CoastSetSw to (true) at time = 1.0
* Set CoastSetSw to (false) at time = 1.1
* Set Brake to (true) at time 1.5
* Set Brake to (false) at time 1.6

Expected output:

* engaged (false) and tspeed (0) for 0 <= time < 1.0
* engaged (true) and tspeed (50) for 1.0 <= time < 1.5
* engaged (false) and tspeed (50) for 1.5 <= time <= end