

Comparison of *HVE* and *HVE-2D* Compatible Programs*

	Programs Available for <i>HVE</i>								
	Programs Available for <i>HVE-2D</i>								
Program Name	EDCRASH	EDSMAC	EDSMAC4	EDSVS	EDVTS	EDGEN	EDVSM	EDVDS	SIMON
Type of Program	Reconstruction	Simulation	Simulation	Simulation	Simulation	Simulation	Simulation	Simulation	Simulation
2-D/3-D	2-D**	2-D**	2-D**	2-D**	2-D**	2-D/3-D	3-D	3-D	3-D
Degrees of Freedom	3/Vehicle	3/Vehicle	3/Vehicle	3	4	6	16	19/Tow Vehicle 22/Full Trailer	21/Tow Vehicle 36/Full Trailer
Number of Vehicles	1 or 2	1 or 2	Unlimited	1	2	1	1	1 to 4	Unlimited
Type of Vehicles	Barrier or Any 2-Axled	Any 2-Axled	All Types	Any 2- or 3-Axled	Any 2- or 3-Axled	Any	Any 2-Axled	3-Axled Tow Vehicle/ 4-Axled Full Trailer	Barrier or Any 3-Axled/ 6-Axled Full Trailer
Collision Model	Damage and Momentum	2-D Rho Vectors	2-D Rho Vectors	No	No	N/A	No	No	DyMESH (3-D Mesh)
Articulation Allowed	No	No	Yes	No	Yes	N/A	No	Yes	Yes
Number of Trailers	N/A	N/A	Unlimited	N/A	1	N/A	N/A	1 to 3	Unlimited
Suspension Model	No	No	Roll Couple Distribution	Roll Couple Distribution	Roll Couple Distribution	N/A	Independent or Solid Axle	Solid Axle	Independent or Solid Axle
Tandem Axles	No	No	Yes	Yes	Yes	N/A	No	Yes	Yes
Max No. Drive Axles	2	2	3	2	3	N/A	1	3	3
Dual Tires	No	No	Yes	Yes	Yes	N/A	Yes	Yes	Yes
Rollover	No	No	No	No	No	Yes	Yes	Yes	Yes
Aerodynamic Drag	No	No	No	No	No	N/A	Yes	No	Yes
HVE Brake Designer	No	No	No	No	No	N/A	Yes	Yes	Yes
HVE Tire Blow-out Model	No	No	Yes	No	No	N/A	Yes	No	Yes
Anti-lock Braking Model	No	No	No	Simple	Simple	N/A	No	No	HVE ABS Simulation Model
Automatic Transmission Model	No	No	No	No	No	N/A	No	No	Yes
HVE Driver Path Follower	No	No	Yes	No	No	N/A	Yes	Yes	Yes
HVE Driver Speed Follower	No	No	No	No	No	N/A	No	No	Yes
Steer Degree-of-Freedom	No	No	Yes	No	No	N/A	Yes	No	Yes
Enhanced Tire-Terrain Models	No	No	No	No	No	N/A	No	No	Yes
HVE Hydroplaning Model	No	No	Yes	No	No	N/A	No	No	Yes
Program Name	EDCRASH	EDSMAC	EDSMAC4	EDSVS	EDVTS	EDGEN	EDVSM	EDVDS	SIMON

NOTE: * indicates that additional models for human simulation, such as EDHIS and GATB are not listed in this comparison.

NOTE: 2-D** indicates that EDCRASH, EDSMAC, EDSMAC4, EDSVS and EDVTS have been extended and revalidated for use in the *HVE* simulation environment to account for 3-D terrain, but they are still essentially 2-dimensional physics simulation programs. If you use EDCRASH, EDSMAC, EDSMAC4, EDSVS, EDVTS or EDGEN in *HVE*, the Human, Vehicle and Environment Editors will have additional features that are not available in *HVE-2D*. While some dialogs will look different between *HVE* and *HVE-2D*, the required inputs for these programs are found in both simulation environments.