



CARBON MOTORS

**Carbon 'E7' Program
MARKET COMPARISON**

OEM	Carbon Motors	General Motors Corporation Chevrolet Impala	Chrysler LLC		Ford Motor Company
Brand Nameplate	TBD Program Code Name - 'E7'		V6	Dodge Charger Hemi	Ford Crown Victoria Police Interceptor
POWERTRAIN/CHASSIS					
Engine	3.0L Turbodiesel (Approximate Displacement)	3.8L V6 SI	3.5L V6 SI	5.7L V8 SI	4.6L V8 SI
Recommended Fuel	Ultra-Low Sulfur (ULS) Diesel	Unleaded Regular	Unleaded Regular	Unleaded Midgrade	Unleaded Regular
Driveline	Rear-Wheel-Drive	Front-Wheel-Drive	Rear-Wheel-Drive		Rear-Wheel-Drive
Horsepower	> 250	240	250	340	250
Torque (lb-ft)	> 400	245	250	390	297
Transmission	multi-speed automatic	4-speed automatic	5-speed automatic with AutoStick		4-speed automatic
Front Suspension	Struts, coil springs, anti-roll bar	Struts, coil springs, anti-roll bar	Control arms, coil springs, anti-roll bar		Control arms, coil springs, anti-roll bar
Rear Suspension	Multi-link, coil springs, self-leveling shocks, anti-roll bar	Struts, coil springs, anti-roll bar	Multi-link, coil springs, self-leveling shocks, anti-roll bar		Live axle, coil springs, anti-roll bar
Braking System	ABS and Brake Assist	ABS	ABS and Brake Assist		ABS
Front Brakes	14" vented discs	11.9" vented disc	13.6" vented disc		12.0" vented disc
Rear Brakes	13" vented discs	10.9" disc	13.8" vented disc		11.5" vented disc
Wheels	19 x 8" steel with tire bead retention	16 x 6.5" steel	18 x 7.5" steel	18 x 7.5" steel	17 x 7.5" steel
Tires	245/55R19	225/60R16	225/60R18	225/60R18	235/55R17
DIMENSIONS					
Wheelbase	122"	110.5"	120.0"		114.6"
Front Track	66.9"	62.4"	63.0"		62.8"
Rear Track	66.9"	61.5"	63.1"		65.6"
Overall Length	200.0"	200.4"	200.1"		212.0"
Overall Width	78.0"	72.9"	74.5"		78.3"
Overall Height	64.2"	58.7"	58.2"		58.3"
Ground Clearance	7.0"	7.1"	5.2"		5.6"
Curb Weight	4000 lbs	3740 lbs	3946 lbs	4248 lbs	4385 lbs
Weight Distribution F/R	50 % / 50 %	62 % / 38%	53% / 47%	54% / 46%	53% / 47%
Seating Capacity	4	5	5		5
Front Headroom	40.0"	39.4"	38.7"		39.5"
Rear Headroom	38.5"	37.8"	36.2"		37.8"
Front Legroom	45.0"	42.3"	41.8"		41.6"
Rear Legroom	40.5"	37.6"	40.2"		38.0"
Front Hip Room	57.5"	56.4"	56.2"		57.4"
Rear Hip Room	58.0"	57.2"	56.2"		56.1"
Cargo Volume	18 - 20 cu ft	18.6 cu ft	16.2 cu ft		20.6 cu ft
PERFORMANCE					
0 - 60 mph	6.5 sec	8.82 sec	8.83 sec	6.53 sec	8.71 sec
Quarter Mile	14.5 sec @ 98.0 mph	16.65 sec @ 87.13 mph	16.77 sec @ 85.33 mph	14.99 sec @ 95.68 mph	16.58 sec @ 85.75 mph
Braking 60 - 0 mph	125 ft	140.5 ft	131.9 ft	132.8 ft	142.4 ft
Maximum Speed	150+ mph	139 mph	132 mph	148 mph	130 mph
Lateral Acceleration	0.85 g	0.84 g	0.80 g	0.83 g	0.80 g
Turning Circle	40.0 ft	38.0 ft	38.9 ft	38.9 ft	40.3 ft
Fuel Capacity	18.0 gal	17.5 gal	18.5 gal	18.5 gal	19.0 gal
Combined	30+ mpg	22 mpg	22 mpg	20 mpg	18 mpg
Useful Range (approximate)	>500 miles	385 miles	407 miles	370 miles	342
Platform Durability	Designed for 250,000 mile, long term, heavy duty usage	Not Available	Not Available		Not Available
ELECTRICAL					
Alternator	200-amp high-output	150-amp with idle boost	160-amp high-output		200-amp high-output
Auxiliary Power Outlets	3	2	3		2
Battery	Dual 12 V, 800 CCA	12 V, 750 CCA	12 V, 800 CCA		Not Available
Cruise Control	Electronic Speed Control	Electronic Speed Control	Electronic Speed Control		Optional - packaged with power seat and CD player
Door Locks	Power locks	Power programmable with lockout protection	Power locks		Power locks
Exterior Emergency Lighting	Emergency lighting visible from 360 degrees	Not available	Not available		Not available
Dimming	Complete interior/exterior lighting blackout (stealth) capability (PRNDL dims to lowest legal limit); warning light flashes when vehicle reaches 10 mph	Not available	Stealth mode switch (turns off instrument cluster and radio indicators: PRNDL dims to lowest legal limit)		Not available
Battery Power Protection	Automatically shuts off all interior/exterior lighting and factory installed emergency equipment after 20 minutes if ignition is in "off" position	Automatically shuts off headlamps and courtesy lights after 20 minutes if ignition is in "off" position; does not protect customer installed equipment	Not available		Not available
Public Address (PA) System	Integrated microphone with steering wheel and A-pillar mounted activation	Not available	Not available		Not available
Siren	Programmable multi-tone, high decibel siren with 130hz - 350hz bass mode; siren controls with tactile feedback integrated into cockpit in ergonomically correct location	Not available	Not available		Not available
Take Down Lights	High intensity, fixed direction lamps integrated in the front roof-line above the windshield	Not Available	Not Available		Not Available



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ELECTRICAL (continued)				
Window Controls - Front	Power with rear window control	Power with rear window lockout switch	Power with passenger lockout switch	Power with passenger lockout switch
Window Controls - Rear	Driver controlled, partial roll down capability	Power	Power	Power
SAFETY				
Airbags	Advanced Multi-stage Driver and Front Passenger Airbag Supplemental Restraint System (SRS), Side and Curtain Airbags	Dual-stage Driver and Front Passenger Airbag Supplemental Restraint System (SRS)	Advanced Multi-stage Driver and Front Passenger Airbag Supplemental Restraint System (SRS)	Dual-stage Driver and Front Passenger Airbag Supplemental Restraint System (SRS)
Crash Protection	Enhanced side-impact crash and rollover protection; 75 mph rear impact crash capability	Not Available	Not Available	75 mph rear impact crash capability
Engine Monitoring	Engine hour meter	Not Available	Not Available	Idle meter: keeps track of when transmission is in "neutral" or "park"
Horn	Center horn blow on steering wheel	Horn blow on left and right of steering wheel hub	Center horn blow on steering wheel	Center horn blow on steering wheel
Seatbelts - Front	Law enforcement compliant 3-point front seatbelts with adjustable shoulder anchors and enlarged release mechanism	Three point shoulder belts	Height adjustable, outboard shoulder belts, three-point	Height adjustable, outboard shoulder belts, three-point
Seatbelts - Rear	In-custody safety transport restraints; child safety seat lower anchors and tethers (LATCH)	Three point shoulder belts	Outboard shoulder belts, three-point	Outboard shoulder belts, three-point
Tire Pressure Monitoring	Low tire pressure indicator with individual tire pressure data and temperature compensation	"Check Tire Pressure" will show on driver messenger center	Warning Lamp	Warning Lamp
Vehicle Stability System	Vehicle Dynamic Control (VDC), Including All-speed Traction Control System (TCS) with Driver-selectable Operating Modes	N/A	Electronic Stability Program (ESP), All-speed Traction Control System (TCS)	All-Speed Traction Control, available Brake/shift interlock
EXTERIOR FEATURES				
Bumpers	Heavy-duty front and rear	5 mph front and rear	5 mph front and rear	5 mph front and rear
Defog/Defrost	Electric rear window	Electric rear window	Electric rear window	Electric rear window
Exterior Body Panels	Damage resistant injection molded, high strength plastic exterior panels	Stamped steel	Stamped steel	Stamped steel
Fuel Door	Locking, interior release	Manual open, no lock	Locking, interior release	Manual open, no lock
Headlamps	Dual halogens on each side with additional dedicated wigwags	Dual halogen composite with daytime running lights	Dual halogen headlamps on each side with automatic off feature	
License Plate Mounts	Front and Rear	Front and Rear	Front and Rear	Front and Rear
Side-mounted Rearview Mirrors	Dual power mirrors	Dual power mirrors	Dual power mirrors	Dual power mirrors
Wipers	Dual speed with variable intermittent adjust and washers	Intermittent, anti-lift with washer	Two speed with variable intermittent modes	Intermittent three speed with washers
INTERIOR FEATURES				
Accelerator/Brake Pedal Adjust	Power adjust	Not Available	Not available	Optional power adjust
Air Conditioning	Heavy duty air-conditioning with additional vents for officer comfort; second zone for rear passenger compartment with independent filtration	Front manual, single zone with air filtration	Front manual, single zone with air filtration	Front manual, single zone with air filtration
Ash Tray	Not Available	Not Available	Included	Included
Cup Holder	Heated and cooled, will accommodate various sized beverages	Cup holder with storage tray between seats	Not Available	Not Available
Ergonomically Correct Armrest	Included	Not Available	Not Available	Not Available
Floor Covering	Ruggedized, all weather floor covering with large integrated drain plugs in the rear passenger compartment and water seep holes for front compartment	Carpeting front and rear	Carpeting front and rear	Carpeting front and rear
Interior Lamps	Direct lighting provided for ergonomically correct writing surface; interior illumination optimized for night vision	Map lights on rearview mirror	Dual overhead map lights	Overhead map lights
Radio	AM/FM radio with auxiliary audio input jack; automatic and manual mute capability	AM/FM Stereo with CD player, digital clock and integrated rear window antenna	AM/FM radio with CD player, changer controls, four speakers, and clock with auxiliary audio input jack	AM/FM Stereo
Rearview Mirror	Day/night manual adjust	Day/night manual adjust with driver and passenger map lights	Day/night manual adjust	Day/night manual adjust
Seat - Driver	6-way power adjust bucket seat with manual recline; lumbar support; long-term durable material; designed to accommodate on-body equipment. Heated and cooled ventilation blower in headrest.	High density foam 6-way power bucket seat with manual reclining seat backs and manual lumbar control	Heavy duty cloth bucket seat with lumbar; manual adjust	



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INTERIOR FEATURES (continued)				
Seat - Front Passenger	2-way manual adjust bucket seat with manual recline; removable; standard material; designed to accommodate on-body equipment; stowage under front seat cushion feature; duty bag retaining feature	High density foam 6-way power bucket seat with manual reclining seat backs and manual lumbar control on driver's seat	Heavy duty cloth bucket seat with lumbar; manual adjust	
Seats - Rear Passenger	Semi-structural molded tub with integrated rear seating and arm cutouts	Vinyl with high density foam	Fixed cloth bench seat	
Steering Column Adjust	Tilt and telescope	Tilt	Tilt	Tilt
Storage	Overhead console, door trim (with lid), glove box, under front passenger seat, seat backs, evidence storage lock box	Glove box	Glove box	Glove box
Visors	Driver and passenger visors with slide-out extension; center visor (over rearview mirror)	LH and RH with covered vanity mirrors		
CARBON UNIQUE EXTERIOR FEATURES				
Base Level Highly Reflective Law Enforcement Decals	Included	Not Available	Not Available	Not Available
Coach Rear Doors for Safer Suspect Insertion and Removal	Included	Not Available	Not Available	Not Available
Heavy-duty Front Door Hinges and Hinge Pillar	Included	Not Available	Not Available	Not Available
Pursuit Intervention Technique (PIT) Protection	Included - Integrated Without Exterior Modification	Not Available	Not Available	Not Available
Push Bumpers - Front	Included - Integrated	Not Available	Not Available	Not Available
Push Bumpers - Rear	Included - Integrated	Not Available	Not Available	Not Available
CARBON UNIQUE INTERIOR FEATURES				
Elimination of Rear Door Trim Panels	Included	Not Available	Not Available	Not Available
Extended Seat Track Movement Without Partition Interference	Included	Not Available	Not Available	Not Available
Fully-integrated Emergency Equipment and Instrumentation in Ergonomic Cockpit	Included	Not Available	Not Available	Not Available
Extensive Redundant Controls (Touch-Screen, Voice Activation and Electro-Mechanical Interfaces) For Selected Law Enforcement Equipment	Included	Not Available	Not Available	Not Available
Highly Durable Steering Wheel Cover Material	Included	Not Available	Not Available	Not Available
Highly Durable Seat Material	Included	Not Available	Not Available	Not Available
Integrated Emergency Controls on Steering Wheel	Included	Not Available	Not Available	Not Available
Lidar Storage	Included	Not Available	Not Available	Not Available
Rear Passenger Compartment Fully Isolated from Front Compartment and Cargo Area	Included	Not Available	Not Available	Not Available
Rear Passenger Compartment Injection Molded to Eliminate Sharp Edges and Hiding Places for Contraband	Included	Not Available	Not Available	Not Available
Trash Bin	Included	Not Available	Not Available	Not Available
CARBON UNIQUE SERVICE FEATURES				
Direct Order from Factory with 24/7 Call Center Support	Included	Not Available	Not Available	Not Available
Vehicle Delivered "Patrol Ready"	Included	Not Available	Not Available	Not Available
Service Training Provided Free of Charge	Included	Not Available	Not Available	Not Available
Vehicle Order to Patrol Time	Typically less than four weeks	Not Available	Not Available	Not Available
Improved End-of-Vehicle-Life Process	Included	Not Available	Not Available	Not Available
AVAILABLE OPTIONS				
Premium Level Highly Reflective Decals - Agency Specific	Available	Not Available	Not Available	Not Available
Alley Lights - High intensity, fixed direction lamps integrated in the left and right outboard roof-line above the B-pillar	Available - Integrated	Not Available	Not Available	Not Available
Audio/Video Surveillance - 120 Degree Rear Facing	Available - Integrated	Not Available	Not Available	Not Available
Audio/Video Surveillance - 180 Degree Forward Facing	Available - Integrated	Not Available	Not Available	Not Available
Audio/Video Surveillance - 180 Degree Rear Passenger Compartment	Available - Integrated	Not Available	Not Available	Not Available
Automatic License Plate Recognition (ALPR) System	Available - Integrated	Not Available	Not Available	Not Available
Backup Camera	Available - Integrated	Not Available	Not Available	Not Available



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AVAILABLE OPTIONS (continued)				
Ballistic Protection - Dash Panel, Cowl Side, Front Door Below Beltline and Partition	Available - Integrated	Not Available	Not Available	Available on front door lowers
Ergonomically Correct Writing Surface	Available	Not Available	Not Available	Not Available
Flashlight and Receptacle/Charger	Included	Not Available	Not Available	Not Available
Forward Looking Infrared (FLIR) System	Available - Integrated	Not Available	Not Available	Not Available
Global Positioning System (GPS)	Available - Integrated	Not Available	Not Available	Not Available
Heads Up Display (HUD)	Available - Integrated	Not Available	Not Available	Not Available
Heated Mirrors	Available	Available	Available	Available
Heated Washers	Available	Not Available	Not Available	Not Available
Intelligent Key with Officer Settings Memory Capability	Available - Integrated	Not Available	Not Available	Not Available
Lojack Tracking System	Available - Integrated	Not Available	Not Available	Not Available
Mobile Data Computer	Available - Integrated	Not Available	Not Available	Not Available
Modular Trunk Organizer	Available - Integrated	Not Available	Not Available	Not Available
Partition (Cage) Between Front and Rear Passenger Compartment	Available - Integrated	Not Available	Not Available	Not Available
Radar - Fwd/Rear Stationary; Fwd/Rear Moving; Fwd/Rear Approaching/Departing; Instant-on with Dual Display, Simultaneous Front and Rear Traffic Monitoring	Available - Integrated	Not Available	Not Available	Not Available
Rear Door Trim Panel Delete	Included	Not Available	Available	Available
Rear Facing, High Mounted Amber Directional Stick	Available - Integrated	Not available	Not available	Not available
Rear Passenger Compartment Windows Protected Against Occupant Breakage	Available	Not Available	Not Available	Not Available
Seat Option - Driver & Passenger	Available - Heated and cooled ventilation blower on passenger seat and memory on driver seat	Not Available	Not Available	Not Available
Shot Gun and Rifle Mounts	Available - Integrated	Not Available	Not Available	Not Available
Spotlights - 300 Degree Horizontal and 90 Degree Vertical Adjustment With Dual Independent Controls	Available - Integrated	Not Available	Available	Available
Two-way Emergency Communication System (Radio)	Available - Integrated	Not Available	Not Available	Not Available
Undercarriage Skid Plate - Front & Rear	Available	Not Available	Not Available	Not Available
Vehicle Anti-theft System	Available	Available (with keyless entry option)	Included (not available when keyed alike)	Not Available
Weapons of Mass Destruction (WMD) Sensor	Available - Integrated	Not Available	Not Available	Not Available

Competitor information is based on published material from the manufacturer and the 2007 Michigan State Police published road tests

* Carbon Motors Corporation reserves the right to alter specifications at any time without notice due to business or technical improvements