



### Fallen Earth

## Vehicle Builder's Technical Reference v.1.4

### Fallen Earth Game Client v.1.1.0b

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My contributions to the original guide by Xellos99 was to add material, component, and time to build requirements. I compiled all the data into this format because .. Well, I hate trying to figure out what I need on the fly.

Thanks go to:

Xellos99: Original Motorized Vehicle Guide (<http://forums.fallenearth.com/fallenearth/showthread.php?t=9264>)

Onca: Dune Buggy specifications

Milenko2121: ATV specifications

Kaerius: Cargo Motorcycle, Biodiesel Motorcycle specifications

Hothnogg: Interceptor specifications and in-game picture

Smilnbob: Electric Dune Buggy specifications

Corpsejacked: Survivalist Buggy specifications, Interceptor speed testing, weapons testing

Harle: Cargo ATV specifications

Deamhain: Combat Buggy specifications

Skalhac: Biodiesel ATV specifications

Xania Thakard: Nomad Buggy specifications

Hedonis: Convoy Buggy specifications

Fodan: Updated Cargo ATV fuel efficiency & specifications

Required Skill Books for Vehicle Components							Required Skill Books for Vehicles			
<b>CONTROL SYSTEMS SKILL BOOK</b>							<b>ATV SKILL BOOKS</b>			
	CONTROL SYSTEMS 1	IMPROVED CONTROL SYSTEMS 1	CONTROL SYSTEMS 2	IMPROVED CONTROL SYSTEMS 2	CONTROL SYSTEMS 3	ADVANCED CONTROL SYSTEMS		BASIC	IMPROVED ATV	ADVANCED ATV
Science Skill Required	30	60	75	105	120	120	Science Skill Required	30	60	75
Component(s) Required	Odenville Phase of ATV Quest						Models Produced	Basic	Cargo; Reinforced; Biodiesel; Electric	Explorer; Hybrid; Assault
ATV Control System		3	2				Component(s) Required			1 Cargo
Motorcycle Control System		3	2			1 Improved	ATV Key(s)			10 Cans of Biodiesel
Dune Buggy Control System				2		2	Materials Required			20 Salvaged
Materials Required							Paper			2
Paper		10 Scrap	8 Scrap	12 Scrap		8 Salvaged	Pen			20 Basic
Pen		2	2	2		2	Vehicle Repair Kit			60 Improved
Vehicle Repair Kit		30 Basic	2 Basic	20 Improved		3 Improved	Time to Build		8h (6h)	32h (24h)
Time to Build		8h (6h)	2h 30m (1h 52m)	14h (10h 30m)		4h (3h)				
								<b>MOTORCYCLE SKILL BOOK</b>		
	ENGINES 1	IMPROVED ENGINES 1	ENGINES 2	IMPROVED ENGINES 2	ENGINES 3	ADVANCED ENGINES		BASIC	IMPROVED MOTORCYCLE	ADVANCED MOTORCYCLE
Science Skill Required	30	60	75	105	120	120	Science Skill Required	45	75	135
Component(s) Required	Oilville Phase of ATV Quest						Models Produced	Basic	Combat; Cargo; Biodiesel; Electric	Courier; Wasteland Rider; Nomad
Gas ATV Engine		2	3				Component(s) Required			
Motorcycle Engine		2					ATV Key(s)	1		
Gas Dune Buggy Engine				2		1	Motorcycle Key(s)		1	1 Cargo
Materials Required							Materials Required			
Paper		12 Scrap	14 Scrap	10 Scrap		15 Salvaged	Pen	14 Scrap	16 Scrap	13 Scrap
Pen		2	2	1		2	Vehicle Repair Kit	50 Basic	60 Basic	50 Improved
Vehicle Repair Kit		20 Basic	60 Basic	1 Basic		40 Improved	Time to Build	1h 30m (1h 7m)	10h (7h 30m)	36h (27h)
Time to Build		8h (6h)	2h 30m (1h 52m)	14h (10h 30m)		4h (3h)				
								<b>DUNE BUGGY SKILL BOOK</b>		
	FRAMES 1	IMPROVED FRAMES 1	FRAMES 2	IMPROVED FRAMES 2	FRAMES 3	ADVANCED FRAMES		BASIC	IMPROVED DUNE BUGGY	ADVANCED DUNE BUGGY
Science Skill Required	30	60	75	105	120	120	Science Skill Required	75	105	
Component(s) Required	Embry Crossroads Phase of ATV Quest						Models Produced	Basic	Convoy; Combat; Survivalist; Electric	Load Runner; Nomad; Skirmish
ATV Frame		2	1				Component(s) Required			
Motorcycle Frame		2	1			1 Improved	ATV Key(s)	1		
Dune Buggy Frame					1	2	Motorcycle Key(s)	1		
Materials Required							Dune Buggy Engine		1	
Paper		10 Scrap	12 Scrap	16 Scrap		10 Salvaged	Dune Buggy Control System		1	
Pen		2	2	2		3	Materials Required			
Vehicle Repair Kit		30 Basic	30 Basic	30 Improved		45 Improved	Paper	10 Scrap	12 Scrap	
Time to Build		8h (6h)	2h 30m (1h 52m)	14h (10h 30m)		4h (3h)	Vehicle Repair Kit	1 Basic	30 Basic	
								Time to Build	2h 30m (1h 52m)	14h (10h 30m)
							<b>TIRES SKILL BOOK</b>			
	TIRES 1	IMPROVED TIRES 1	TIRES 2	IMPROVED TIRES 2	TIRES 3	ADVANCED TIRES		BASIC	IMPROVED INTERCEPTOR	ADVANCED INTERCEPTOR (?)
Science Skill Required	30	60	75	105	120	120	Science Skill Required	164	195	?
Component(s) Required	Kingman Phase of ATV Quest						Models Produced	Speedster		
ATV Tires		9 Kingman ATV	5 Kingman ATV				Component(s) Required			
Motorcycle Tires				2		2	Dune Buggy Key(s)	1 Convoy		
Dune Buggy Tires							Interceptor Key(s)			
Materials Required							Materials Required			
Paper		12 Scrap	12 Scrap	12 Scrap		12 Salvaged	Paper	15 Salvaged		
Pen		2	2	2		2	Pen	3		
Geologic Chemical		10 Weak	12 Weak	-		10 Impure	Vehicle Repair Kit	20 Advanced		
Vehicle Repair Kit		60 Basic	20 Basic	20 Improved		20 Improved	Time to Build	5h 30m (4h 1m)		
Time to Build		8h (6h)	2h 30m (1h 52m)	14h (10h 30m)		20h (15h)				

**OPTIONAL SKILLBOOKS & MATERIAL REQUIREMENTS**

These skillbooks are optional, not necessarily required since you can purchase most materials from vendors or other players. By learning these skills, it will save chips down the road, **however**, be aware that by crafting your own components and materials, your Time to Build will **increase**.

Time to build = base time (time if in a workshop) Note: Time to Build **does not** include material(s) crafting times.

MATERIAL SKILL BOOKS (OPTIONAL)								
	BIODIESEL FORMULA	GASOLINE FORMULA	PEN	REFINE GEARS	REFINE FASTNERS	REFINE PAPER	REFINE STEEL	VEHICLE BATTERY
Skill Required	Science 60	Science 60	Science 45	Science 30	Science 45	Science 60	Geology 45	Science 60
Purchased from			Science Trainer			Science or Geology Trainer		Science Trainer

  

VEHICLE REPAIR KIT SKILL BOOKS			
	BASIC VEHICLE REPAIR KIT	IMPROVED VEHICLE REPAIR KIT	ADVANCED VEHICLE REPAIR KIT
Science Skill Required	30	90	
Component(s) Required			
Vehicle Repair Kit		40 Basic	
Materials Required			
Fasteners	SCIENCE TRAINER	15 Scrap	
Steel		12 Scrap	
Paper		10 Scrap	
Pen		1	
Time to Build		2h (1h 30m)	

  

REFINE PAPER				
	SCRAP	SALVAGED	PLAIN	PRISTINE
Science Skill Level	60	120	150	240*
Skill Book Required	Refine Paper			
Materials Required				
Botanic Chemical	1 Weak	1 Impure	1 Average	1 Average
Water	6 Tainted	1 Questionable	2 Potable	1 Pure
Wood	10 Scrap	2 Salvaged	4 Treated	2 Strong
Time to Build	16m 40s (12m 30s)	23m 20s (17m 30s)	33m 20s (25m)	36m 40s (27m 30s)

  

REFINE FASTNERS				
	SCRAP	SALVAGED	COMMON	SUPERIOR
Science Skill Level	45	105	164	225*
Skill Book Required	Refine Fastners			
Materials Required				
Steel	2 Scrap	6 Scrap	10 Scrap	6 Salvaged
Time to Build	15m (11m 15s)	21m 40s (16m 15s)	28m 20s (21m 15s)	35m (26m 15s)

  

REFINE GEARS				
	SCRAP	SALVAGED	AVERAGE	PRISTINE
Science Skill Level	30	90	150	210*
Skill Book Required	Refine Gears			
Materials Required				
Steel	1 Scrap	5 Scrap	3 Salvaged	5 Common
Time to Build	13m 20s (10m)	20m (15m)	26m 40s (20m)	33m 20s (25m)

  

REFINE STEEL				
	SCRAP	SALVAGED	COMMON	SUPERIOR
Geology Skill Level	45	105	164	225*
Skill Book Required	Refine Steel			
Materials Required				
Coal	2 Scrap	3 Salvaged	4 Improved	1 Pure
Iron	4 Scrap	4 Salvaged	3 Salvaged	2 Superior
Time to Build	15m (11m 15s)	21m 40s (16m 15s)	28m 20s (21m 15s)	35m (26m 15s)

  

FUEL FORMULAS				
	BIODIESEL FORMULA	IMPROVED BIODIESEL	GASOLINE FORMULAS	IMPROVED GASOLINE
Science Skill Required	60	120	60	120
Component(s) Required				
Can(s) of Fuel		18 Cans of Biodiesel		9 Cans of Gasoline
Materials Required				
Botanic Chemical	SCIENCE TRAINER	10 Impure	SCIENCE TRAINER	
Paper		6 Salvaged		6 Salvaged
Pen		1		1
Time to Build		3h 20m (2h 30m)		2h 40m (2h)

  

VEHICLE REPAIR KIT			
	BASIC	IMPROVED	ADVANCED
Science Skill Level	30	90	
Skill Book Required	Basic Vehicle Repair Kit	Improved Vehicle Repair Kit	
Materials Required			
Copper			
Fasteners	1 Scrap		
Gears	1 Scrap		
Glass			
Geologic Chemical			
Rubber			
Steel	1 Scrap		
Time to Build	6m (4m 30s)		

  

FUEL FORMULAS				
	BIODIESEL FORMULA	IMPROVED BIODIESEL	GASOLINE FORMULAS	IMPROVED GASOLINE
Formula Required				
Science Skill Required	60	120	60	120
Materials Required				
Botanic Chemical	3 Weak			
Geologic Chemical			2 Weak	
Grain	10 Tainted			
Petroleum			6 Weak	
Time to Build	6m (4m 30s)		6m (4m 30s)	
Produce	5 Cans of Biodiesel		5 Cans of Gasoline	

  

Vehicle Battery	
Science Skill Level	60
Skill Book Required	Vehicle Battery Manual
Materials Required	
Acid	8 Dilute
Copper	5 Salvaged
Geologic Chemical	2 Weak
Time to Build	6m (4m 30s)

  

PEN	
Science Skill Level	45
Skill Book Required	Pen
Materials Required	
Botanic Chemical	1 Weak
Copper	1 Scrap
Plastic	1 Scrap
Time to Build	3m 45s (2m 48s)

**Material Requirements for Components**

*Time to build = base time (time if in a workshop) Note: Time to Build does not include material(s) crafting times.*

CONTROL SYSTEMS										
Component Produced	ATV Control System	Motorcycle Control System	Improved ATV Control System	Improved Motorcycle Control System	Dune Buggy Control System	??	Interceptor Control System ?	??		
Skill Book Required	Control System 1		Improved Control Systems 1		Control System 2	Improved Control Systems 2	Control Systems 3	Advanced Control Systems		
Science Skill Level	30	45	60	75	75					
Components Required			ATV Control System	Motorcycle Control System						
Materials Required					15 Salvaged					
Copper	3 Scrap	10 Scrap								
Fastners	3 Scrap	5 Scrap	10 Scrap	15 Scrap	20 Scrap					
Gears	3 Scrap	5 Scrap	10 Scrap	15 Scrap	15 Scrap					
Glass		2 Scrap	8 Scrap	10 Scrap	5 Scrap					
Geologic Chemical										
Rubber										
Steel	3 Scrap	10 Scrap	10 Scrap	15 Scrap	15 Scrap					
Time to Build	4h 21m (3h 16m)	6h 32m (4h 54m)	4h 21m (3h 16m)	4h 21m (3h 16m)	10h 54m (8h 10m)					

ENGINES											
Component Produced	Gas ATV Engine	Gas Motorcycle Engine	Improved Gas ATV Engine	Improved Gas Motorcycle Engine	Biodiesel ATV Engine	Biodiesel Motorcycle Engine	Electric ATV Engine	Electric Motorcycle Engine	Gas Dune Buggy Engine	Interceptor Engine ?	
Skill Book Required	Engines 1		Improved Engines 1							Engines 2	Engines 3
Science Skill Level	30	45	60	75	75	90	90	105	75	120	
Components Required			Gas ATV Engine	Gas Motorcycle Engine	Improved Gas ATV Engine	Improved Gas Motorcycle Engine					
Materials Required											
Acid							5 Impure	5 Impure			
Copper		5 Scrap					10 Salvaged	10 Salvaged	15 Salvaged		
Fastners	5 Scrap	10 Scrap	20 Scrap	30 Scrap	15 Scrap	15 Scrap	40 Scrap	20 Salvaged	30 Scrap		
Gears	5 Scrap	10 Scrap	15 Scrap	25 Scrap	5 Scrap	5 Salvaged	30 Salvaged	20 Salvaged	30 Scrap		
Glass											
Geologic Chemical		3 Weak	5 Weak	10 Weak	5 Weak	5 Weak			10 Weak		
Rubber											
Steel	5 Scrap	15 Scrap	20 Scrap	25 Scrap	15 Scrap	10 Scrap	40 Scrap	20 Salvaged	40 Scrap		
Time to Build	4h 21m (3h 16m)	6h 32m (4h 54m)	4h 21m (3h 16m)	4h 21m (3h 16m)	2h 10m (1h 38m)	2h 10m (1h 38m)	13h 5m (9h 49m)	15h 16m (11h 27m)	10h 54m (8h 10m)		

FRAMES										
Component Produced	ATV Frame	Motorcycle Frame	Light ATV Frame	Light Motorcycle Frame	Reinforced ATV Frame	Reinforced Motorcycle Frame	Dune Buggy Frame	??	Interceptor Frame ?	??
Skill Book Required	Frames 1		Improved Frames 1				Frames 2	Improved Frames 2	Frames 3	Advanced Frames
Components Required			ATV Frame	Motorcycle Frame						
Science Skill Level	30	45	60	75	60	75	75	105	120	120
Materials Required										
Copper										
Fastners	5 Scrap	10 Scrap	20 Scrap	30 Scrap	16 Scrap	20 Scrap	30 Scrap			
Gears										
Glass		5 Scrap	5 Scrap	8 Scrap	5 Scrap	8 Scrap	10 Scrap			
Rubber	3 Scrap	6 Scrap	10 Scrap	10 Scrap	5 Scrap	10 Scrap	20 Scrap			
Steel	6 Scrap	15 Scrap	22 Scrap	35 Scrap	30 Scrap	45 Scrap	70 Scrap			
Time to Build	4h 21m (3h 16m)	6h 32m (4h 54m)	4h 21m (3h 16m)	4h 21m (3h 16m)	4h 21m (3h 16m)	4h 21m (3h 16m)	10h 54m (8h 10m)			

TIRES										
Component Produced	Kingman ATV Tires	Motorcycle Tires	Improved ATV Tires	Improved Motorcycle Tires	DUNE BUGGY	??	Interceptor	??		
Skill Book Required	Tires 1		Improved Tires 1		Tires 2	Improved Tires 2	Tires 3	Advanced Tires		
Science Skill Level	30	45	60	75	75	105	120			
Materials Required										
Copper										
Fastners										
Gears										
Glass										
Geologic Chemical	2 Weak	10 Weak	15 Weak	30 Weak	30 Weak					
Rubber	10 Scrap	22 Scrap	35 Scrap	50 Scrap	50 Scrap					
Steel			10 Scrap	20 Scrap	20 Scrap					
Time to Build	4h 21m (3h 16m)	6h 32m (4h 54m)	8h 43m (6h 32m)	8h 43m (6h 32m)	10h 54m (8h 10m)					

**All Terrain Vehicles (ATVs)**

*Time to build = base time (time if in a workshop) Note: Time to Build includes component crafting times. It does not include material(s) crafting times such as refining scrap steel or building Vehicle Repair Kits. Material requirement totals include all necessary materials to craft the components and assemble the vehicle except for building Vehicle Repair Kits.*

ATV (Basic)			
Technical Data		Builders Data	
Skill to Drive	COO 20	Science Skill Level	30
Fuel Type	Gasoline	Skill Book Required	ATV
Fuel Capacity	16000	Components Required	
Fuel Efficiency		Control System	1x ATV CS
Durability	200	Engine	1x Gas ATV Eng
Speed Factor	32	Frame	1x ATV Frame
Strength		Tires	1x Kingman ATV Tires
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	3 Scrap
Braking		Fastners	13 Scrap
Max Sack Size (Cargo Slots)	10	Gears	8 Scrap
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	2 Weak
		Rubber	13 Scrap
		Steel	14 Scrap
		Vehicle Repair Kit	1 Basic
		Time to Build	21h 45m (16h 20m)

REINFORCED ATV			
Technical Data		Builders Data	
Skill to Drive	COO 30	Science Skill Level	60
Fuel Type	Gasoline	Skill Book Required	Improved ATV 1
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	1x Improved ATV CS
Durability		Engine	1x Improved ATV Gas Eng
Speed Factor	32	Frame	1x Reinforced ATV Frame
Strength		Tires	1x Improved ATV Tires
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	46 Scrap
Max Sack Size (Cargo Slots)		Gears	25 Scrap
Weight (Max Cargo Wgt)		Glass	13 Scrap
		Geologic Chemical	20 Weak
		Rubber	40 Scrap
		Steel	70 Scrap
		Vehicle Repair Kit	14 Basic
		Time to Build	30h 29m (22h 42m)

ELECTRIC ATV			
Technical Data		Builders Data	
Skill to Drive	COO 40	Science Skill Level	90
Fuel Type	Vehicle Battery	Skill Book Required	Improved ATV 1
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	1x Improved ATV CS
Durability		Engine	1x Electric ATV Eng
Speed Factor	32	Frame	1x Light ATV Frame
Strength		Tires	1x Improved ATV Tires
Acceleration		Materials Required	
Slope Angle Limit		Acid	5 Impure
Max Turn Angle		Copper	10 Salvaged
Braking		Fastners	20 Scrap
Max Sack Size (Cargo Slots)		Gears	10 Scrap - 30 Salvaged
Weight (Max Cargo Wgt)		Glass	13 Scrap
		Geologic Chemical	15 Weak
		Rubber	45 Scrap
		Steel	82 Scrap
		Vehicle Repair Kit	90 Improved
		Time to Build	43h 35m (32h 42m)

HYBRID ATV			
Technical Data		Builders Data	
Skill to Drive	COO 55	Science Skill Level	135
Fuel Type		Skill Book Required	Advanced ATV
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	
Durability		Engine	
Speed Factor	32	Frame	
Strength		Tires	
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)		Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

CARGO ATV			
Technical Data		Builders Data	
Skill to Drive	COO 30	Science Skill Level	60
Fuel Type	Gasoline	Skill Book Required	Improved ATV 1
Fuel Capacity	24000	Components Required	
Fuel Efficiency	220	Control System	1x Improved ATV CS
Durability	500	Engine	1x Improved ATV Gas Eng
Speed Factor	32	Frame	1x Reinforced ATV Frame
Strength	200	Tires	1x Improved ATV Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit	600	Acid	
Max Turn Angle	600	Copper	
Braking	350	Fastners	46 Scrap
Max Sack Size (Cargo Slots)	20	Gears	25 Scrap
Weight (Max Cargo Wgt)	140	Glass	13 Scrap
		Geologic Chemical	20 Weak
		Rubber	40 Scrap
		Steel	70 Scrap
		Vehicle Repair Kit	22 Basic
		Time to Build	30h 29m (22h 42m)

BIODIESEL ATV			
Technical Data		Builders Data	
Skill to Drive	COO 35	Science Skill Level	75
Fuel Type	Biodiesel	Skill Book Required	Improved ATV 1
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	1x Improved ATV CS
Durability		Engine	1x Biodiesel ATV Eng
Speed Factor	32	Frame	1x Light ATV Frame
Strength		Tires	1x Improved ATV Tires
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	41 Scrap
Max Sack Size (Cargo Slots)		Gears	15 Scrap
Weight (Max Cargo Wgt)		Glass	13 Scrap
		Geologic Chemical	20 Weak
		Rubber	40 Scrap
		Steel	55 Scrap
		Vehicle Repair Kit	50 Basic
		Time to Build	30h 26m (22h 50m)

EXPLORER ATV			
Technical Data		Builders Data	
Skill to Drive	COO 50	Science Skill Level	120
Fuel Type		Skill Book Required	Advanced ATV
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	
Durability		Engine	
Speed Factor	32	Frame	
Strength		Tires	
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)		Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

ASSAULT ATV			
Technical Data		Builders Data	
Skill to Drive	COO 60	Science Skill Level	165?
Fuel Type	Gasoline	Skill Book Required	Advanced ATV
Fuel Capacity	30000	Components Required	
Fuel Efficiency		Control System	
Durability	1000	Engine	
Speed Factor	32	Frame	
Strength		Tires	
Acceleration		Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)	12	Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

**Motorcycles**

*Time to build = base time (time if in a workshop) Note: Time to Build includes component crafting times. It does not include material(s) crafting times such as refining scrap steel or building Vehicle Repair Kits. Material requirement totals include all necessary materials to craft the components and assemble the vehicle except for building Vehicle Repair Kits.*

MOTORCYCLE (Basic)			
Technical Data		Builders Data	
Skill to Drive	COO 25	Science Skill Level	45
Fuel Type	Gasoline	Skill Book Required	Motorcycle
Fuel Capacity	10000	Components Required	
Fuel Efficiency		Control System	1x Motorcycle CS
Durability	200	Engine	1x Gas Motorcycle Eng
Speed Factor	40	Frame	1x Motorcycle Frame
Strength		Tires	1x Motorcycle Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	15 Scrap
Braking		Fastners	25 Scrap
Max Sack Size (Cargo Slots)	8	Gears	15 Scrap
Weight (Max Cargo Wgt)		Glass	7 Scrap
		Geologic Chemical	3 Weak
		Rubber	22 Scrap
		Steel	40 Scrap
		Vehicle Repair Kit	1 Basic
		Time to Build	32h 40m (24h 30m)

CARGO MOTORCYCLE			
Technical Data		Builders Data	
Skill to Drive	COO 35	Science Skill Level	75
Fuel Type	Gasoline	Skill Book Required	Improved Motorcycle
Fuel Capacity	13000	Components Required	
Fuel Efficiency		Control System	1x Improved M CS
Durability	450	Engine	1x Gas Motorcycle Eng
Speed Factor	40	Frame	1x Reinforced M Frame
Strength		Tires	1x Improved M Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	5 Scrap
Braking		Fastners	45 Scrap
Max Sack Size (Cargo Slots)	12	Gears	25 Scrap
Weight (Max Cargo Wgt)		Glass	18 Scrap
		Geologic Chemical	33 Weak
		Rubber	60 Scrap
		Steel	95 Scrap
		Vehicle Repair Kit	100 Basic
		Time to Build	34h 51m (26h 8m)

ELECTRIC MOTORCYCLE			
Technical Data		Builders Data	
Skill to Drive	COO 45	Science Skill Level	105
Fuel Type	Vehicle Battery	Skill Book Required	Improved Motorcycle
Fuel Capacity	20000	Components Required	
Fuel Efficiency		Control System	1x Improved M CS
Durability	450	Engine	1x Electric M Eng
Speed Factor	40	Frame	1x Light M Frame
Strength		Tires	1x Improved M Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	5 Impure
Max Turn Angle		Copper	10 Salvaged
Braking		Fastners	45 Scrap - 20 Salvaged
Max Sack Size (Cargo Slots)	8	Gears	15 Scrap - 20 Salvaged
Weight (Max Cargo Wgt)		Glass	18 Scrap
		Geologic Chemical	30 Weak
		Rubber	60 Scrap
		Steel	70 Scrap - 20 Salvaged
		Vehicle Repair Kit	100 Improved
		Time to Build	47h 57m (35h 58m)

WASTELAND RIDER			
Technical Data		Builders Data	
Skill to Drive	COO 60	Science Skill Level	165
Fuel Type	Biodiesel	Skill Book Required	Advanced Motorcycle
Fuel Capacity	15000	Components Required	
Fuel Efficiency		Control System	
Durability	600	Engine	
Speed Factor	40	Frame	
Strength		Tires	
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)	8	Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

COMBAT MOTORCYCLE			
Technical Data		Builders Data	
Skill to Drive	COO 35	Science Skill Level	75
Fuel Type	Gasoline	Skill Book Required	Improved Motorcycle
Fuel Capacity	10000	Components Required	
Fuel Efficiency		Control System	1x Motorcycle CS
Durability	500	Engine	1x Improved Gas M Eng
Speed Factor	40	Frame	1x Reinforced M
Strength		Tires	1x Improved M Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	10 Scrap
Braking		Fastners	55 Scrap
Max Sack Size (Cargo Slots)	8	Gears	30 Scrap
Weight (Max Cargo Wgt)		Glass	10 Scrap
		Geologic Chemical	40 Weak
		Rubber	60 Scrap
		Steel	100 Scrap
		Vehicle Repair Kit	60 Basic
		Time to Build	32h 40m (24h 30m)

BIO DIESEL MOTORCYCLE			
Technical Data		Builders Data	
Skill to Drive	COO 40	Science Skill Level	90
Fuel Type	Biodiesel	Skill Book Required	Improved Motorcycle
Fuel Capacity	15000	Components Required	
Fuel Efficiency		Control System	1x Improved M CS
Durability	400	Engine	1x Biodiesel M Eng
Speed Factor	40	Frame	1x Light M Frame
Strength		Tires	1x Improved M Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	60 Scrap
Max Sack Size (Cargo Slots)	8	Gears	15 Scrap - 5 Salvaged
Weight (Max Cargo Wgt)		Glass	18 Scrap
		Geologic Chemical	35 Weak
		Rubber	60 Scrap
		Steel	80 Scrap
		Vehicle Repair Kit	130 Basic
		Time to Build	64h 35m (48h 27m)

COURIER MOTORCYCLE			
Technical Data		Builders Data	
Skill to Drive	COO 55	Science Skill Level	135
Fuel Type	Gasoline	Skill Book Required	Advanced Motorcycle
Fuel Capacity	20000	Components Required	
Fuel Efficiency		Control System	
Durability	600	Engine	
Speed Factor	40	Frame	
Strength		Tires	
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)	20	Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

NOMAD SPEEDSTER			
Technical Data		Builders Data	
Skill to Drive	COO 65	Science Skill Level	165
Fuel Type	Gasoline	Skill Book Required	Advanced Motorcycle
Fuel Capacity	15000	Components Required	
Fuel Efficiency		Control System	
Durability	700	Engine	
Speed Factor	40	Frame	
Strength		Tires	
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)	16	Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

**Dune Buggy**

*Time to build = base time (time if in a workshop) Note: Time to Build includes component crafting times. It does not include material(s) crafting times such as refining scrap steel or building Vehicle Repair Kits. Material requirement totals include all necessary materials to craft the components and assemble the vehicle except for building Vehicle Repair Kits.*

DUNE BUGGY (Basic)			
Technical Data		Builders Data	
Skill to Drive	DEX 35	Science Skill Level	75
Fuel Type	Gasoline	Skill Book Required	Dune Buggy
Fuel Capacity	38000	Components Required	
Fuel Efficiency	60	Control System	1x Dune Buggy CS
Durability	500	Engine	1x Gas Dune Buggy Eng
Speed Factor	35	Frame	1x Dune Buggy Frame
Strength	250	Tires	1x Dune Buggy Tires
Acceleration	Fast	Materials Required	
Slope Angle Limit	500	Acid	
Max Turn Angle	900	Copper	30 Salvaged
Braking	450	Fastners	80 Scrap
Max Sack Size (Cargo Slots)	16	Gears	45 Scrap
Weight (Max Cargo Wgt)	165	Glass	15 Scrap
		Geologic Chemical	40 Weak
		Rubber	70 Scrap
		Steel	135 Scrap
		Vehicle Repair Kit	1 Basic
		Time to Build	54h 30m (40h 40m)

COMBAT BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 50	Science Skill Level	120
Fuel Type	Gasoline	Ballistics Skill Level	105
Fuel Capacity	30000	Skill Book Required	Improved Dune Buggy
Fuel Efficiency		Skill Book Required	Vehicle Weapons 1
Durability	600	Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)	10	Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

ELECTRIC BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 55	Science Skill Level	135
Fuel Type	Vehicle Battery	Ballistics Skill Level	105
Fuel Capacity	60000	Skill Book Required	Improved Dune Buggy
Fuel Efficiency		Skill Book Required	Vehicle Weapons 1
Durability	500	Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)	20	Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

NOMAD BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 70	Science Skill Level	180*
Fuel Type		Ballistics Skill Level	165
Fuel Capacity		Skill Book Required	Advanced Dune Buggy
Fuel Efficiency		Skill Book Required	Improved Vehicle Wpns 1
Durability		Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)		Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

CONVOY BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 45	Science Skill Level	105
Fuel Type	Gasoline	Skill Book Required	Improved Dune Buggy
Fuel Capacity		Components Required	
Fuel Efficiency		Control System	
Durability		Engine	
Speed Factor	35	Frame	
Strength		Tires	
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fastners	
Max Sack Size (Cargo Slots)		Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

SURVIVALIST BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 50	Science Skill Level	120
Fuel Type	Biodiesel	Ballistics Skill Level	105
Fuel Capacity	50000	Skill Book Required	Improved Dune Buggy
Fuel Efficiency		Skill Book Required	Vehicle Weapons 1
Durability	500	Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)	16	Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

LOAD RUNNER			
Technical Data		Builders Data	
Skill to Drive	DEX 65	Science Skill Level	165
Fuel Type	Gasoline	Ballistics Skill Level	165
Fuel Capacity	35000	Skill Book Required	Advanced Dune Buggy
Fuel Efficiency		Skill Book Required	Improved Vehicle Wpns 1
Durability	700	Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)	24	Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

SKIRMISH BUGGY			
Technical Data		Builders Data	
Skill to Drive	DEX 75	Science Skill Level	195*
Fuel Type		Ballistics Skill Level	165
Fuel Capacity		Skill Book Required	Advanced Dune Buggy
Fuel Efficiency		Skill Book Required	Improved Vehicle Wpns 1
Durability		Components Required	
Speed Factor	35	Control System	
Strength		Engine	
Acceleration	Fast	Frame	
Slope Angle Limit		Tires	
Max Turn Angle		Materials Required	
Braking		Acid	
Max Sack Size (Cargo Slots)		Copper	
Weight (Max Cargo Wgt)		Fastners	
		Gears	
		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	

**Interceptor**

*Time to build = base time (time if in a workshop) Note: Time to Build includes component crafting times. It does not include material(s) crafting times such as refining scrap steel or building Vehicle Repair Kits. Material requirement totals include all necessary materials to craft the components and assemble the vehicle except for building Vehicle Repair Kits.*

INTERCEPTOR SPEEDSTER			
Technical Data		Builders Data	
Skill to Drive	DEX 65	Science Skill Level	60
Fuel Type	Improved Gasoline	Skill Book Required	Interceptor
Fuel Capacity	45000	Components Required	
Fuel Efficiency		Control System	
Durability	600	Engine	
Speed Factor	507	Frame	
Strength		Tires	
Acceleration	Fast	Materials Required	
Slope Angle Limit		Acid	
Max Turn Angle		Copper	
Braking		Fasteners	
Max Sack Size (Cargo Slots)	12	Gears	
Weight (Max Cargo Wgt)		Glass	
		Geologic Chemical	
		Rubber	
		Steel	
		Vehicle Repair Kit	
		Time to Build	