

# **Type 6 Fire Engine — Model 643 Chassis Only Specification**

Issue Date: February 2016

Supersedes: January 2011

## Table of Contents

<b>Record of Revisions</b>	<b>3</b>
<b>1 — Chassis Specifications</b>	<b>4</b>
1.1 General	4
1.2. Wheelbase	4
1.3 Cab-to-Axle	4
1.4 Gross Vehicle Weight Requirement	4
1.5 After Frame	4
1.6 Tow Hooks	4
1.7 Frame Rails	4
1.8 Bumper, Front	4
1.9 Axle, Front, Driving	4
1.10 Suspension, Front	4
1.11 Brake System	4
1.12 Steering Column	5
1.13 Steering Wheel	5
1.14 Steering	5
1.15 Exhaust	5
1.16 Electrical System	5
1.17 Alternator	5
1.18 Battery System	6
1.19 Radio	6
1.20 Grille	6
1.21 Engine	6
1.22 Engine Option	6
1.23 Transmission	6
1.24 Transfer Case	7
1.25 Axle, Rear	7
1.26 Suspension, Rear	7
1.27 Fuel Tank	7
1.30 Cab	7
1.29 Chassis Color	8
1.30 Tires and Wheels	8
1.31 Included	8

## Record of Revisions

<u>Date</u>	<u>Revision Summary</u>
February 2009	• Initial release as part of turnkey specifications
February 2011	• Revision
February 2016	• Updated format
	• Added "General Statement"
	• Added after-frame dimensions
	• Added Operator Commanded Regeneration (OCR)
	• Revised alternator specification
	• Revised GVWR
Future Revisions	• This space is reserved for future revisions

## **1 — Chassis Specifications**

### **1.1 General**

1.1.1 The intent of this specification is to provide a 19,500 GVWR (Diesel) or 19,000 GVWR (Gasoline) four-door, crew cab or extended cab chassis. This chassis specification is intended to be used with “USDA Forest Service, Apparatus Body Only Specification – Type 6 Fire Engine – Model 643U” or “USDA Forest Service, Apparatus Body Only Specification – Type 6 Fire Engine – Model 643P.”

1.1.2 The chassis shall include the following features:

### **1.2. Wheelbase**

1.2.1 176.2 inches maximum

### **1.3 Cab-to-Axle**

1.3.1 60 inches

### **1.4 Gross Vehicle Weight Requirement**

1.4.1 19,500 pounds (Diesel Engine); 19,000 pounds (Gasoline Engine)

### **1.5 After Frame**

1.5.1 48 inches

### **1.6 Tow Hooks**

1.6.1 Front, two; inside rail; frame mounted

### **1.7 Frame Rails**

1.7.1 Heat treated alloy steel

### **1.8 Bumper, Front**

1.8.1 Steel; swept back; step bumper; painted black

### **1.9 Axle, Front, Driving**

1.9.1 Single; 7,000 pound capacity

### **1.10 Suspension, Front**

1.10.1 Live axle; stabilizer bar

### **1.11 Brake System**

Includes:

U.S.D.A. Forest Service  
National Technology And Development Center, San Dimas

- 1.11.1 Front brakes: Disk; vented rotor design
- 1.11.2 Rear brakes: Disk; vented rotor design
- 1.11.3 Dust shields; front and rear axles
- 1.11.4 Anti-Lock Braking System: Full vehicle wheel control system
- 1.11.5 Exhaust brake with drive control switch (Dodge only)

**1.12 Steering Column**

- 1.12.1 Tilting

**1.13 Steering Wheel**

- 1.13.1 4-spoke; black urethane

**1.14 Steering**

- 1.14.1 Power recirculating ball; steering damper

**1.15 Exhaust**

- 1.15.1 Single, horizontal; with after-treatment device; frame mounted under cab; includes tailpipe and guard

**1.16 Electrical System**

- 1.16.1 12-volt

- 1.16.2 Includes:

- 1.16.2.1 Headlights; two; Halogen
- 1.16.2.2 Horn; electric; single
- 1.16.2.5 Starter switch; electric; key operated
- 1.16.2.6 Headlight dimmer switch integral with turn signal lever
- 1.16.2.7 Turn signal switch; self-canceling
- 1.16.2.8 Windshield wiper; 2-speed; integral with turn signal switch; with wash/intermittent feature
- 1.16.2.10 Wiring; chassis; color coded and continuously numbered

**1.17 Alternator**

- 1.17.1 Dual; 12-volt direct current; 220 amp minimum capacity

### **1.18 Battery System**

1.18.1 Two; 750 total cold cranking amps batteries minimum; maintenance-free

1.18.2 Battery saver system

### **1.19 Radio**

1.19.1 AM/FM stereo with CD player; 2 speakers

### **1.20 Grille**

1.20.1 Stationary; black

### **1.21 Engine**

1.21.1 Diesel; V8, 6.7L; 50 State EPA Emissions Compliant

1.21.2 Includes:

1.21.2.1 Operator commanded regeneration (OCR) allowed down to 30% of DPF filter full

1.21.2.2 Air cleaner; single element

1.21.2.3 Throttle; electronically controlled

1.21.2.4 Auxiliary idle control

1.21.2.5 Fuel/water separator, with water-in-fuel sensor and heater

1.21.2.6 Engine block heater

1.21.2.7 Indicator, low coolant level with audible alarm

1.21.2.8 Heavy duty engine cooling

1.21.2.9 Disable idle shut down feature

1.21.2.10 Clean idle emissions label (Dodge only)

### **1.22 Engine Option**

1.22.1 Gasoline; V10, 6.8L

1.22.2 Includes:

1.22.2.1 All items from specification 1.21.2 (above, as applicable)

### **1.23 Transmission**

1.23.1 Automatic; tow/haul mode

### **1.24 Transfer Case**

1.24.1 Two-speed; skid plate package

### **1.25 Axle, Rear**

1.25.1 Single; 13,500 lb. capacity minimum

### **1.26 Suspension, Rear**

1.26.1 Live axle; with shock absorbers; stabilizer bar

### **1.27 Fuel Tank**

1.27.1 Capacity: 40-gallons minimum; steel; rear-mounted

### **1.30 Cab**

1.28.1 Conventional 6 person crew cab

1.28.2 Includes:

1.28.2.1 Clearance lights; five; flush-mounted

1.28.2.2 Interior assist and ride handles

1.28.2.3 Mirrors; exterior; two; rectangular; folding trailer tow mirrors; day/night rear view

1.28.2.4 Gauge cluster; English with electronic speedometer; tachometer; oil pressure; coolant temperature; fuel level; voltmeter; washer fluid level; engine hour meter; trip odometer

1.28.2.5 Warning system; low fuel level, low oil pressure; high coolant temperature; low voltage; high transmission temperature

1.28.2.6 Gauge, transmission temperature

1.28.2.7 Gauge; air cleaner restriction

1.28.2.8 Seat; front vinyl; 40/20/40 split bench

1.28.2.9 Seat; rear bench

1.28.2.10 Height adjustable front shoulder belts

1.28.2.11 3-point seat belts; driver's & passenger's & outboard rear cab seats (total of four); Red or orange in color, if available

1.28.2.12 2-point seat belt; center rear seat (total of one); Red or orange in color, if available

U.S.D.A. Forest Service  
National Technology And Development Center, San Dimas

- 1.28.2.13 Air conditioner with integral heater and defroster
- 1.28.2.14 Fresh air filter for HVAC
- 1.28.2.15 Tinted glass
- 1.28.2.16 Dome light with automatic dimming, door activated and push ON/OFF
- 1.28.2.17 Black vinyl floor covering
- 1.28.2.18 Vinyl sun visors with mirrors
- 1.28.2.19 Power door locks
- 1.28.2.20 Power windows
- 1.28.2.21 Cruise control
- 1.28.2.22 Multi-stage front airbags
- 1.28.2.23 Transfer case skid plate shield
- 1.28.2.24 Tubular side steps
- 1.28.2.25 Single color cab exterior finish paint

**1.29 Chassis Color**

- 1.29.1 Single color cab exterior finish paint, No. 14260 of Federal Standard No. 595 (Forest Service Green).

**1.30 Tires and Wheels**

- 1.30.1 Steel wheels; painted white; 19.5-inch
- 1.30.2 Tires Front: 225/70R19.5, maximum traction, load range G
- 1.30.3 Tires Rear: 225/70R19.5, maximum traction, load range G

**1.31 Included**

- 1.31.1 Included with chassis order, one spare wheel and one spare tire matching the wheels and front tires, delivered affixed to the cab and chassis.