



Run Smart™

CARGO WORKSHOP MANUAL

Foreword

The purpose of this manual is to assist the service technician when the vehicle is serviced. Major drivetrain component service information is not included in this manual, but is located in each manufacturer's service manual.

Instructions and procedures are those recommended by vehicle manufacturer or the component manufacturer.

Maintenance schedules and additional service information are included in the *Cargo Maintenance Manual*.

IMPORTANT: Descriptions and specifications in this manual were in effect at the time of printing. The vehicle manufacturer reserves the right to discontinue models at any time, or change specifications and design without notice and without incurring obligation. Descriptions and specifications contained in this publication provide no warranty, expressed or implied, and are subject to revision and editions without notice.

Refer to www.FreightlinerTrucks.com, and www.SterlingTrucks.com, and www.DaimlerTrucksNorthAmerica.com for more information, or contact Daimler Trucks North America LLC at the address below.

Environmental Concerns and Recommendations

Whenever you see instructions in this manual to discard materials, you should attempt to reclaim and recycle them. To preserve our environment, follow appropriate environmental rules and regulations when disposing of materials.

NOTICE: Parts Replacement Considerations

Do not replace suspension, axle, or steering parts (such as springs, wheels, hubs, and steering gears) with used parts. Used parts may have been subjected to collisions or improper use and have undetected structural damage.

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Descriptions of Service Publications

Daimler Trucks North America LLC distributes the following major service publications in paper and electronic (via ServicePro®) formats.

Workshop/Service Manual	Workshop/service manuals contain service and repair information for all vehicle systems and components, except for major components such as engines, transmissions, and rear axles. Each workshop/service manual section is divided into subjects that can include general information, principles of operation, removal, disassembly, assembly, installation, and specifications.
Maintenance Manual	Maintenance manuals contain routine maintenance procedures and intervals for vehicle components and systems. They have information such as lubrication procedures and tables, fluid replacement procedures, fluid capacities, specifications, and procedures for adjustments and for checking the tightness of fasteners. Maintenance manuals do not contain detailed repair or service information.
Driver's/Operator's Manual	Driver's/operator's manuals contain information needed to enhance the driver's understanding of how to operate and care for the vehicle and its components. Each manual contains a chapter that covers pretrip and post-trip inspections, and daily, weekly, and monthly maintenance of vehicle components. Driver's/operator's manuals do not contain detailed repair or service information.
Service Bulletins	<p>Service bulletins provide the latest service tips, field repairs, product improvements, and related information. Some service bulletins are updates to information in the workshop/service manual. These bulletins take precedence over workshop/service manual information, until the latter is updated; at that time, the bulletin is usually canceled. The service bulletins manual is available only to dealers. When doing service work on a vehicle system or part, check for a valid service bulletin for the latest information on the subject.</p> <p>IMPORTANT: Before using a particular service bulletin, check the current service bulletin validity list to be sure the bulletin is valid.</p>
Parts Technical Bulletins	Parts technical bulletins provide information on parts. These bulletins contain lists of parts and BOMs needed to do replacement and upgrade procedures.
<p>Web-based repair, service, and parts documentation can be accessed using the following applications on the AccessFreightliner.com and AccessSterling.com websites.</p>	
ServicePro	ServicePro® provides Web-based access to the most up-to-date versions of the publications listed above. In addition, the Service Solutions feature provides diagnostic assistance with Symptoms Search, by connecting to a large knowledge base gathered from technicians and service personnel. Search results for both documents and service solutions can be narrowed by initially entering vehicle identification data.
PartsPro	PartsPro® is an electronic parts catalog system, showing the specified vehicle's build record.
EZWiring	EZWiring™ makes Freightliner, Sterling, Western Star, Thomas Built Buses, and Freightliner Custom Chassis Corporation products' wiring drawings and floating pin lists available online for viewing and printing. EZWiring can also be accessed from within PartsPro.

Descriptions of Service Publications

Warranty-related service information available on the AccessFreightliner.com and AccessSterling.com websites includes the following documentation.

Recall Campaigns

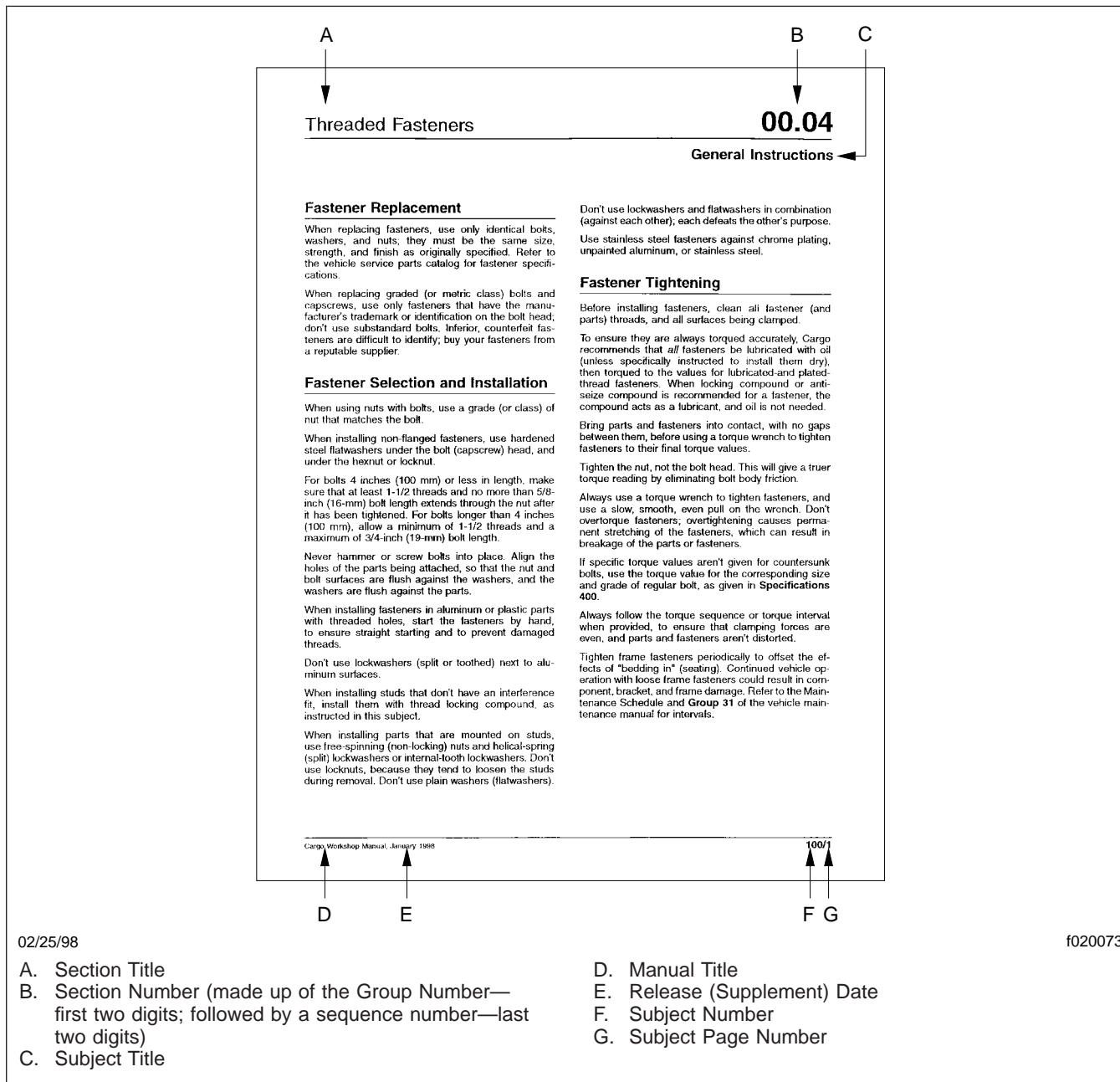
Recall campaigns cover situations that involve service work or replacement of parts in connection with a recall notice. These campaigns pertain to matters of vehicle safety. All recall campaigns are distributed to dealers; customers receive notices that apply to their vehicles.

Field Service Campaigns

Field service campaigns are concerned with non-safety-related service work or replacement of parts. All field service campaigns are distributed to dealers; customers receive notices that apply to their vehicles.

Page Description

For an example of a *Cargo Workshop Manual* page, see [Fig. 1](#).



02/25/98

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- A. Section Title
- B. Section Number (made up of the Group Number—first two digits; followed by a sequence number—last two digits)
- C. Subject Title
- D. Manual Title
- E. Release (Supplement) Date
- F. Subject Number
- G. Subject Page Number

Fig. 1, Example of a Cargo Workshop Manual Page

Group No.	Group Title
00	General Information
01	Engine
09	Air Intake
13	Air Compressor
15	Alternators and Starters
20	Engine Cooling/Radiator
25	Clutch
26	Transmission
30	Throttle Control
31	Frame and Frame Components
32	Suspension
33	Front Axle
35	Rear Axle
40	Wheels and Tires
41	Driveline
42	Brakes
46	Steering
47	Fuel
49	Exhaust
54	Electrical, Instruments, and Controls
60	Cab
72	Doors
82	Windshield Wipers and Washer
83	Heater and Air Conditioner
91	Seats and Restraint Systems
98	Paint

Vehicle Receipt

Prior to signing for vehicle delivery from a transporter company, the dealer is responsible for checking for transporter-related shortages or damages, and noting these discrepancies on the transporter's delivery receipt.

The dealer is also responsible for ensuring that the vehicle was built according to the Truck Sales Order/ Invoice.

Refer to Section 3 of the Freightliner LLC *Warranty Manual* for details.

Vehicle Storage

There may be times when a vehicle is stored for long periods before customer delivery. To protect all vehicles from deterioration and weather, they must be properly maintained. Adequate protection and storage of new vehicles is the responsibility of the dealer.

Claims arising from loss and damage to improperly stored vehicles will not be reimbursed.

See Section 3 of the Freightliner LLC *Warranty Manual* for instructions on storage of new vehicles.

Pre-Delivery Information

All pre-delivery inspections and services must be performed at an authorized Freightliner LLC facility, assigned to fully qualified service personnel and recorded on the "New Vehicle Pre-Delivery Inspection" form.

Refer to Section 3 of the Freightliner LLC *Warranty Manual* for details.

It is recommended the pre-delivery inspection be performed within 30 days of vehicle receipt.

General Information

U.S. Customary to Metric			Metric to U.S. Customary		
When You Know	Multiply By	To Get	When You Know	Multiply By	To Get
Length					
inches (in)	25.4	millimeters (mm)	0.03937		inches (in)
inches (in)	2.54	centimeters (cm)	0.3937		inches (in)
feet (ft)	0.3048	meters (m)	3.281		feet (ft)
yards (yd)	0.9144	meters (m)	1.094		yards (yd)
miles (mi)	1.609	kilometers (km)	0.6215		miles (mi)
Area					
square inches (in ²)	645.16	square millimeters (mm ²)	0.00155		square inches (in ²)
square inches (in ²)	6.452	square centimeters (cm ²)	0.15		square inches (in ²)
square feet (ft ²)	0.0929	square meters (m ²)	10.764		square feet (ft ²)
Volume					
cubic inches (in ³)	16387.0	cubic millimeters (mm ³)	0.000061		cubic inches (in ³)
cubic inches (in ³)	16.387	cubic centimeters (cm ³)	0.06102		cubic inches (in ³)
cubic inches (in ³)	0.01639	liters (L)	61.024		cubic inches (in ³)
fluid ounces (fl oz)	29.54	milliliters (mL)	0.03381		fluid ounces (fl oz)
pints (pt)	0.47318	liters (L)	2.1134		pints (pt)
quarts (qt)	0.94635	liters (L)	1.0567		quarts (qt)
gallons (gal)	3.7854	liters (L)	0.2642		gallons (gal)
cubic feet (ft ³)	28.317	liters (L)	0.03531		cubic feet (ft ³)
cubic feet (ft ³)	0.02832	cubic meters (m ³)	35.315		cubic feet (ft ³)
Weight/Force					
ounces (av) (oz)	28.35	grams (g)	0.03527		ounces (av) (oz)
pounds (av) (lb)	0.454	kilograms (kg)	2.205		pounds (av) (lb)
U.S. tons (t)	907.18	kilograms (kg)	0.001102		U.S. tons (t)
U.S. tons (t)	0.90718	metric tons (t)	1.1023		U.S. tons (t)
Torque/Work Force					
inch-pounds (lbf-in)	11.298	Newton-centimeters (N-cm)	0.08851		inch-pounds (lbf-in)
foot-pounds (lbf-ft)	1.3558	Newton-meters (N-m)	0.7376		foot-pounds (lbf-ft)
Pressure/Vacuum					
inches of mercury (inHg)	3.37685	kilo Pascals (kPa)	0.29613		inches of mercury (inHg)
pounds per square inch (psi)	6.895	kilo Pascals (kPa)	0.14503		pounds per square inch (psi)

When You Know	Subtract	Then Divide By	To Get	When You Know	Multiply By	Then Add	To Get
degrees Fahrenheit (°F)	32	1.8	degrees Celsius (°C)	degrees Celsius (°C)	1.8	32	degrees Fahrenheit (°F)

VIN for Vehicles Built through April 30, 2000

IMPORTANT: For vehicles built May 1, 2000, or later, see **Subject 060** for the Sterling vehicle identification numbering system or **Subject 070** for the Freightliner system.

Federal Motor Vehicle Safety Standard 115 specifies that all vehicles sold in the U.S. be assigned a 17-character vehicle identification number (VIN). Using a combination of letters and numerals, the VIN defines the manufacturer, model, and major characteristics of the vehicle. See **Table 1** for the character positions of a typical Sterling VIN, 480ALEBDXWA345678.

On Sterling vehicles, the VIN can be found on the Vehicle Specification Decal (see the driver's manual for decal location) and stamped on the outside of the left-hand frame rail about 24 to 40 inches (60 to 100 cm) aft of the front axle centerline. On Sterling vehicles built before July 1998, the VIN is stamped on the frame rail near the front axle position.

On Freightliner vehicles, the VIN can be found on the Vehicle Specification Decal (see the driver's manual for decal location) and stamped into the left frame rail over the front axle about 2 inches (50 mm) from the top of the web, or on the top flange of the left frame rail at frame station 30.

NOTE: For Freightliner vehicles assembled and sold in Mexico, the VIN appears on a plate or

label attached to the driver's door. Also, a data card placed in the glove box shows the Mexican VIN as the "CHASSIS" number. The "CABIN" number is part of the Freightliner VIN, the last six digits of which are the Freightliner serial number.

IMPORTANT: A new VIN-code structure will be used for all vehicles built after April 30, 2000. Character positions 1 through 4 and 9 through 17 are nearly the same in both versions, but positions 5 through 8 have been assigned slightly different parameters. As a result, the build date of a vehicle must be determined before the VIN can be decoded.

For all vehicles, a check digit (9th character) is determined by assignment of weighted values to the other 16 characters. These weighted values are processed through a series of equations designed to check validity of the VIN and to detect VIN alteration.

NOTE: Always specify the VIN when ordering parts.

Seventeen-Character Vehicle Identification Number (VIN)																											
Typical VIN	4	8	0	A	L	E	B	D	X	W	A	3	4	5	6	7	8										
Character Position	1, 2, 3	4	5	6, 7	8	9	10	11	12 thru 17																		
Decoding Table *	Table 2	Table 3	Table 4 Table 5	Table 6	Table 7	—	Table 8	Table 9	—																		
Code Description	Manufacturer, Make, Vehicle Type			Chassis, Front Axle Position, Brakes			Vehicle Model Series, Cab			Engine Model, Horsepower Range			Gross Vehicle Weight Rating (GVWR)			Check Digit			Vehicle Model Year			Plant of Manufacture			Production Number		

* For corresponding decoding information, see the applicable tables in this subject.

Table 1, Seventeen-Character Vehicle Identification Number (VIN)

VIN for Vehicles Built through April 30, 2000

VIN Positions 1, 2, and 3 (Manufacturer, Make, Vehicle Type)			
Code	Vehicle Manufacturer	Vehicle Make	Vehicle Type
1FU	Freightliner, U.S.A.	Freightliner	Truck-Tractor
1FV	Freightliner, U.S.A.	Freightliner	Incomplete Vehicle
2FU	Freightliner, Canada	Freightliner	Truck-Tractor
2FV	Freightliner, Canada	Freightliner	Incomplete Vehicle
2FW	Sterling, Canada-built	Sterling	Truck-Tractor
2FZ	Sterling, Canada-built	Sterling	Incomplete Vehicle
3FE	M-B, Mexico (before April 1996)	Freightliner	Truck-Tractor
3FF	M-B, Mexico (before April 1996)	Freightliner	Incomplete Vehicle
3AK	M-B, Mexico (after April 1996)	Freightliner	Truck-Tractor
3AL	M-B, Mexico (after April 1996)	Freightliner	Incomplete Vehicle
480	Sterling, U.S.-built	Sterling	Truck-Tractor
49H	Sterling, U.S.-built	Sterling	Incomplete Vehicle
AFV	M-B, South Africa	Freightliner	Truck
KFB	AIL, Israel	Freightliner	Truck
RSA	NAI, Saudi Arabia	Freightliner	Incomplete Vehicle
RSB	NAI, Saudi Arabia	Freightliner	Truck-Tractor

Table 2, VIN Positions 1, 2, and 3 (Manufacturer, Make, Vehicle Type)

VIN Position 4 (Chassis, Front Axle Position, Brakes)			
Code	Chassis	Front Axle Position	Brakes
A	4 x 2 Truck	Forward	Hydraulic
B	8 x 4 Truck-Tractor	Setback	Air
C	6 x 6 Truck-Tractor	Setback	Air
D	4 x 4 Truck	Setback	Hydraulic
E	4 x 4 Truck	Setback	Air
F	8 x 4 Truck	Forward	Air
G	8 x 4 Truck-Tractor	Forward	Air
H	4 x 2 Truck	Forward	Air
J	10 x 4 Truck	All	Air
K	4 x 2 Truck-Tractor	Forward	Air
L	6 x 2 Truck	Forward	Air
M	6 x 2 Truck-Tractor	Forward	Air
N	6 x 4 Truck	Forward	Air
P	6 x 4 Truck-Tractor	Forward	Air
R	10 x 6 Truck	Forward	Air

VIN Position 4 (Chassis, Front Axle Position, Brakes)			
Code	Chassis	Front Axle Position	Brakes
S	10 x 6 Truck-Tractor	Forward	Air
T	6 x 6 Truck	Setback	Air
U	8 x 6 Truck	All	Air
V	8 x 6 Truck-Tractor	All	Air
W	4 x 2 Truck-Tractor	Setback	Air
X	6 x 4 Truck	Setback	Air
Y	6 x 4 Truck-Tractor	Setback	Air
Z	6 x 2 Truck	Setback	Air
1	4 x 2 Truck	Forward	Air/Hydraulic
2	4 x 4 Truck	Setback	Air
3	4 x 2 Truck	Setback	Hydraulic
4	8 x 4 Truck	Setback	Air
5	6 x 2 Truck-Tractor	Setback	Air
6	4 x 2 Truck	Setback	Air
7	Glider	Setback	Air

VIN for Vehicles Built through April 30, 2000

VIN Position 4 (Chassis, Front Axle Position, Brakes)			
Code	Chassis	Front Axle Position	Brakes
8	Glider	Forward	Air
9	4 x 2 Truck	Setback	Air/Hydraulic
0	Glider	Setback	Air

Table 3, VIN Position 4 (Chassis, Front Axle Position, Brakes)

Sterling VIN Position 5 (Vehicle Model Series, Cab)	
Code	Sterling Models
A	L7500 series
B	L8500 series
C	L9501
D	L8511
E	L9500 series
F	L9522
G	A9522
H	A9500 series
J	A9513
K	L9513

Sterling VIN Position 5 (Vehicle Model Series, Cab)	
Code	Sterling Models
L	L8501
M	L8513
N	L9511
R	L7501
S	ST9500
W	SC8000
2	SC6000
7	SC7000

Table 4, Sterling VIN Position 5 (Vehicle Model Series, Cab)

Freightliner VIN Position 5 (Model Series, Cab)	
Code	Freightliner Models
W	FC80 Freightliner Cargo COE
2	FC60 Freightliner Cargo COE
7	FC70 Freightliner Cargo COE

Table 5, Freightliner VIN Position 5 (Model Series, Cab)

VIN Positions 6 and 7 (Engine Manufacturer, Model, Horsepower Range)			
Code	Engine Manufacturer	Engine Model	HP Range
AY	Cummins	NTC / N14	207–251
BD	Mercedes-Benz	MBE4000	353–407
BE	Mercedes-Benz	MBE4000	408–495
BX	Mercedes-Benz	MBE4000	288–352
BY	Cummins	NTC / N14	254–310
CX	Detroit Diesel	S-60, 11.1 L	331–402
CY	Cummins	N14	315–385
DY	Cummins	NTC / N14	389–475
DZ	Cummins	N14	476–580
EB	Caterpillar	C10 / 3176J	225–275
EC	Caterpillar	C10 / 3176J	276–335
ED	Caterpillar	C10 / 3176	336–407
F4	Cummins	B5.9 (propane)	185–224
FA	Cummins	6BT 5.9 (diesel) / ISB	185–224

00.03

Vehicle Identification Numbering System

VIN for Vehicles Built through April 30, 2000

VIN Positions 6 and 7 (Engine Manufacturer, Model, Horsepower Range)			
Code	Engine Manufacturer	Engine Model	HP Range
FB	Cummins	6BT 5.9 (diesel) / ISB	225–275
FF	Cummins	6BT 5.9/ ISB	153–184
FH	Cummins	6BT 5.9–195G (natural gas)	185–224
FV	Cummins	6BT 5.9–195G (natural gas)	126–152
GA	Mercedes-Benz	OM 366LA	185–224
GB	Mercedes-Benz	OM 366LA	225–275
GF	Mercedes-Benz	OM 366LA	153–184
HB	Detroit Diesel	S–50	225–275
HC	Detroit Diesel	S–50	276–335
HD	Detroit Diesel	S–50	336–407
JA	Caterpillar	CFE / 3126 (diesel)	185–224
JB	Caterpillar	CFE / 3126 (diesel)	225–275
JC	Caterpillar	CFE / 3126 (diesel)	276–335
JF	Caterpillar	CFE / 3126 (diesel)	153–184
KY	Cummins	L10	225–275
LA	Cummins	6C 8.3 (diesel) / ISC	185–224
LB	Cummins	6C 8.3 (diesel) / ISC	225–275
LC	Cummins	6C 8.3 (diesel) / ISC	276–335
LD	Cummins	L10	336–407
LE	Cummins	ISC	336–407
LL	Cummins	C 8.3 (natural gas) / ISC	225–276
LY	Cummins	L10	276–330
MC	Cummins	M11 / ISM	276–335
MD	Cummins	M11 / ISM	336–407
ME	Cummins	M11 / ISM	408–495
MW	Cummins	ISM	496–605
NT	Cummins	4B 3.9–130 hp (diesel)	126–152
PY	Detroit Diesel	S-60, 11.1 L	275–330
RY	Caterpillar	3406	270–330
SE	Detroit Diesel	S-60, 12.7 L	408–495
SM	Detroit Diesel	S-60, 12.7 L	276–335
SY	Caterpillar	3406	333–407
SZ	Detroit Diesel	S-60, 12.7 L	496–605
TD	Detroit Diesel	S-55	336–407
TE	Detroit Diesel	S-55	408–495

VIN for Vehicles Built through April 30, 2000

VIN Positions 6 and 7 (Engine Manufacturer, Model, Horsepower Range)			
Code	Engine Manufacturer	Engine Model	HP Range
TJ	Dodge	Magnum V8 (gasoline)	207–253
TR	Dodge	Magnum V10 (gasoline)	270–330
TY	Caterpillar	3408	383–467
UY	Caterpillar	3306	225–275
VY	Caterpillar	3406	225–269
WC	Caterpillar	CFE/3126	276–335
WD	Caterpillar	C12 / 3176L	336–407
WE	Caterpillar	C12 / 3176L	408–495
WY	Caterpillar	3306	276–335
XY	Caterpillar	3406	408–495
XZ	Caterpillar	3406	496–605
YY	Detroit Diesel	S-60, 11.1 L	225–274
ZY	Detroit Diesel	S-60, 12.7 L	333–407
1B	Detroit Diesel	6L–71	225–275
1C	Detroit Diesel	6L–71	276–335
2W	Detroit Diesel	S-60, 14.0L	496–605
3A	Mercedes-Benz	MB904	185–224
4Y	Detroit Diesel	6V–92	239–287
5Y	Detroit Diesel	6V–92	288–352
6A	Mercedes-Benz	MB906	185–224
6B	Mercedes-Benz	MB906	225–275
6C	Mercedes-Benz	MB906	276–335
6Y	Detroit Diesel	8V–92	365–446
7D	Cummins	ISX Signature	336–407
7E	Cummins	ISX Signature	408–495
7W	Cummins	ISX Signature	496–605
8Y	Detroit Diesel	8V–92	302–364
9Y	Detroit Diesel	8V–92	447–522
0Y	No Engine	—	—

Table 6, VIN Positions 6 and 7 (Engine Manufacturer, Model, Horsepower Range)

VIN Position 8 (Gross Vehicle Weight Rating)		
Code	lb	kg
A	26,001–33,000	11 794–14 968
B	33,001 or over	14 969 or over

VIN for Vehicles Built through April 30, 2000

VIN Position 8 (Gross Vehicle Weight Rating)		
Code	lb	kg
C	19,501–26,000	8846–11 793
D	16,001–19,500	7258–8845
2	6001–10,000	2722–4536
3	10,001–14,000	4537–6350
4	14,001–16,000	6351–7257
9	N/A: Incomplete Vehicle or Glider	

Table 7, VIN Position 8 (Gross Vehicle Weight Rating)

VIN Position 10 (Vehicle Model Year)	
Code	Model Year
N	1992
P	1993
R	1994
S	1995
T	1996
V	1997
W	1998
X	1999
Y	2000
1	2001
3	2002

Table 8, VIN Position 10 (Vehicle Model Year)

VIN Position 11 (Plant of Manufacture)	
Code	Plant of Manufacture
A	St. Thomas, Ontario
H	Mt. Holly, North Carolina

Table 9, VIN Position 11 (Plant of Manufacture)

Sterling VIN for Vehicles Built from May 1, 2000

IMPORTANT: See [Subject 050](#) for the vehicle identification numbering system for vehicles built before May 1, 2000.

Federal Motor Vehicle Safety Standard 115 specifies that all vehicles sold in the U.S. be assigned a 17-character Vehicle Identification Number (VIN). Using a combination of letters and numerals, the VIN defines the manufacturer, model, and major characteristics of the vehicle. See [Table 1](#) for the character positions of a typical Sterling VIN, 2FZPABAV11AA12345.

The VIN can be found on the Vehicle Specification Decal (see the driver's manual for decal location) and stamped on the outside of the frame rails about 24 to 40 inches (60 to 100 cm) aft of the front axle centerline.

IMPORTANT: A revised VIN-code structure will be used for all vehicles built after April 30, 2000. As a result, the build date of a vehicle must be determined before the VIN can be decoded.

Character positions 1 through 4 and 9 through 17 are nearly the same in both versions, but positions 5 through 8 have been assigned slightly different parameters.

Another new feature is that each product line has its own model list; that is, positions 5 and 6 are different for each business unit. For example, the code AB in positions 5 and 6 for a Sterling vehicle indicates an SC7000 Cargo. Code AB in the same position for a Freightliner vehicle represents an FLD112.

For all vehicles, a check digit (9th character) is determined by assignment of weighted values to the other 16 characters. These weighted values are processed through a series of equations designed to check validity of the VIN and to detect VIN alteration.

NOTE: Always specify the VIN when ordering parts.

Seventeen-Character Vehicle Identification Number (VIN)								
Typical VIN	2 F Z	P	A B	A V	1	1	A	A 1 2 3 4 5
Character Position	1, 2, 3	4	5, 6	7, 8	9	10	11	12-17
Code Description	World Manufacturer Identification	Chassis Configuration	Model, Cab, GVWR	Engine, Brakes	Check Digit Calculation	Model Year	Build Location	Production Serial Number
Decoding Table *	Table 2	Table 3	Table 4	Table 5	—	Table 6	Table 7	—

* For corresponding decoding information, see the applicable tables in this subject.

Table 1, Seventeen-Character Vehicle Identification Number (VIN)

VIN Positions 1, 2, and 3 (World Manufacturer Identification)			
Code	Vehicle Manufacturer	Vehicle Make	Vehicle Type
2FW	Sterling, Canada-built	Sterling	Truck-Tractor
2FZ	Sterling, Canada-built	Sterling	Incomplete Vehicle
480	Sterling, U.S.-built	Sterling	Truck-Tractor
49H	Sterling, U.S.-built	Sterling	Incomplete Vehicle

Table 2, VIN Positions 1, 2, and 3 (World Manufacturer Identification)

VIN Position 4 (Chassis Configuration)	
Code	Chassis
A	4 x 2 Truck
B	4 x 2 Truck-Tractor

VIN Position 4 (Chassis Configuration)	
Code	Chassis
D	4 x 4 Truck
E	4 x 4 Truck-Tractor

00.03

Vehicle Identification Numbering System

Sterling VIN for Vehicles Built from May 1, 2000

VIN Position 4 (Chassis Configuration)	
Code	Chassis
F	6 x 2 Truck
G	6 x 2 Truck-Tractor
H	6 x 4 Truck
J	6 x 4 Truck-Tractor
K	6 x 6 Truck
L	6 x 6 Truck-Tractor
M	8 x 4 Truck
N	8 x 4 Truck-Tractor
P	8 x 6 Truck
R	8 x 6 Truck-Tractor
S	10 x 4 Truck
T	10 x 4 Truck-Tractor
U	10 x 6 Truck-Tractor
V	10 x 6 Truck-Tractor
X	Glider

Table 3, VIN Position 4 (Chassis, Front Axle Position, Brakes)

VIN Positions 5 and 6 (Model, Cab, Class/GVWR)			
Code	Model	Cab	Class (GVWR)
AA	SC7000 Cargo	COE	Class 6 *
AB	SC7000 Cargo	COE	Class 7 †
AC	SC7000 Cargo	COE	Class 8 ‡
AD	SC8000 Cargo	COE	Class 7
AE	SC8000 Cargo	COE	Class 8
AF	M5500 Acterra	Conventional	Class 5 §
AG	M6500 Acterra	Conventional	Class 5
AH	M6500 Acterra	Conventional	Class 6
AJ	M7500 Acterra	Conventional	Class 6
AK	M7500 Acterra	Conventional	Class 7
AL	M8500 Acterra	Conventional	Class 6
AM	M8500 Acterra	Conventional	Class 7
AN	M8500 Acterra	Conventional	Class 8

VIN Positions 5 and 6 (Model, Cab, Class/GVWR)			
Code	Model	Cab	Class (GVWR)
AP	L7500 Series	Conventional	Class 5
AR	L7500 Series	Conventional	Class 6
AS	L7500 Series	Conventional	Class 7
AT	L7500 Series	Conventional	Class 8
AU	L7500 Series Glider	Conventional	Glider
AV	L8500 Series	COE	Class 7
AW	L8500 Series	COE	Class 8
AX	L8500 Series Glider	COE	Glider
AY	L9500 Series	Conventional	Class 7
AZ	L9500 Series	Conventional	Class 8
A1	L9500 Series Glider	Conventional	Glider
A2	A9500 Series	Conventional	Class 7
A3	A9500 Series	Conventional	Class 8
A4	A9500 Series Glider	Conventional	Glider
A5	ST9500 Series	Conventional	Class 7
A6	ST9500 Series	Conventional	Class 8
A7	ST9500 Series Glider	Conventional	Glider
A8	L7501	Conventional	Class 6
A9	L7501	Conventional	Class 7
A0	L7501	Conventional	Class 8
BA	L8501	Conventional	Class 6
BB	L8501	Conventional	Class 7
BC	L8501	Conventional	Class 8
BD	L8511	Conventional	Class 7
BE	L8511	Conventional	Class 8
BF	L8513	Conventional	Class 7
BG	L8513	Conventional	Class 8
BH	L9501	Conventional	Class 7
BJ	L9501	Conventional	
BK	L9511	Conventional	Class 7
BL	L9511	Conventional	Class 8
BM	L9513	Conventional	Class 7
BN	L9513	Conventional	Class 8

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VIN Positions 5 and 6 (Model, Cab, Class/GVWR)			
Code	Model	Cab	Class (GVWR)
BP	A9522	Conventional	Class 7
BR	A9522	Conventional	Class 8
BS	L9522	Conventional	Class 7
BT	L9522	Conventional	Class 8
BU	T-2	COE	Class 7
BV	T-2	COE	Class 8
BW	L9513	Conventional	Class 7
BX	L9513	Conventional	Class 8

* Class 6 GVWR is 19,501–26,000 lb.

† Class 7 GVWR is 26,001–33,000 lb.

‡ Class 8 GVWR is 33,001 lb and over.

§ Class 5 GVWR is 16,001–19,500 lb.

Table 4, VIN Positions 5 and 6 (Model, Cab, Class/GVWR)

VIN Positions 7 and 8 (Engine, Brakes)					
Code	Engine	Fuel	Displacement (L)	Configuration	Brakes
AA	Caterpillar 3176	Diesel	10.3	I-6	Air
AB	Caterpillar 3176	Diesel	10.3	I-6	Hydraulic
AC	Caterpillar 3176	Diesel	10.3	I-6	Air/Hydraulic
AD	Caterpillar 3406	Diesel	14.6	I-6	Air
AE	Caterpillar 3406	Diesel	14.6	I-6	Hydraulic
AF	Caterpillar 3406	Diesel	14.6	I-6	Air/Hydraulic
AG	Caterpillar 3406E	Diesel	15.8	I-6	Air
AH	Caterpillar 3406E	Diesel	15.8	I-6	Hydraulic
AJ	Caterpillar 3406E	Diesel	15.8	I-6	Air/Hydraulic
AK	Caterpillar 3126/CFE	Diesel	7.2	I-6	Air
AL	Caterpillar 3126/CFE	Diesel	7.2	I-6	Hydraulic
AM	Caterpillar 3126/CFE	Diesel	7.2	I-6	Air/Hydraulic
AN	Caterpillar C10	Diesel	10.3	I-6	Air
AP	Caterpillar C10	Diesel	10.3	I-6	Hydraulic
AR	Caterpillar C10	Diesel	10.3	I-6	Air/Hydraulic
AS	Caterpillar C12	Diesel	12.0	I-6	Air
AT	Caterpillar C12	Diesel	12.0	I-6	Hydraulic
AU	Caterpillar C12	Diesel	12.0	I-6	Air/Hydraulic

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Vehicle Identification Numbering System

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VIN Positions 7 and 8 (Engine, Brakes)					
Code	Engine	Fuel	Displacement (L)	Configuration	Brakes
AV	Caterpillar C15	Diesel	14.6	I-6	Air
AW	Caterpillar C15	Diesel	14.6	I-6	Hydraulic
AX	Caterpillar C15	Diesel	14.6	I-6	Air/Hydraulic
AY	Caterpillar C16	Diesel	15.8	I-6	Air
AZ	Caterpillar C16	Diesel	15.8	I-6	Hydraulic
A1	Caterpillar C16	Diesel	15.8	I-6	Air/Hydraulic
A2	Cummins L10	Diesel	10.8	I-6	Air
A3	Cummins L10	Diesel	10.8	I-6	Hydraulic
A4	Cummins L10	Diesel	10.8	I-6	Air/Hydraulic
A5	Cummins M11	Diesel	10.8	I-6	Air
A6	Cummins M11	Diesel	10.8	I-6	Hydraulic
A7	Cummins M11	Diesel	10.8	I-6	Air/Hydraulic
A8	Cummins ISM	Diesel	10.8	I-6	Air
A9	Cummins ISM	Diesel	10.8	I-6	Hydraulic
A0	Cummins ISM	Diesel	10.8	I-6	Air/Hydraulic
BA	Cummins NTC	Diesel	14.0	I-6	Air
BB	Cummins NTC	Diesel	14.0	I-6	Hydraulic
BC	Cummins NTC	Diesel	14.0	I-6	Air/Hydraulic
BD	Cummins N14	Diesel	14.0	I-6	Air
BE	Cummins N14	Diesel	14.0	I-6	Hydraulic
BF	Cummins N14	Diesel	14.0	I-6	Air/Hydraulic
BG	Cummins ISX/Signature	Diesel	14.9	I-6	Air
BH	Cummins ISX/Signature	Diesel	14.9	I-6	Hydraulic
BJ	Cummins ISX/Signature	Diesel	14.9	I-6	Air/Hydraulic
BK	Cummins C8.3	Diesel	8.3	I-6	Air
BL	Cummins C8.3	Diesel	8.3	I-6	Hydraulic
BM	Cummins C8.3	Diesel	8.3	I-6	Air/Hydraulic
BN	Cummins B5.9	Diesel	5.9	I-6	Air
BP	Cummins B5.9	Diesel	5.9	I-6	Hydraulic
BR	Cummins B5.9	Diesel	5.9	I-6	Air/Hydraulic
BS	Cummins ISC	Diesel	8.3	I-6	Air
BT	Cummins ISC	Diesel	8.3	I-6	Hydraulic
BU	Cummins ISC	Diesel	8.3	I-6	Air/Hydraulic

Sterling VIN for Vehicles Built from May 1, 2000

VIN Positions 7 and 8 (Engine, Brakes)					
Code	Engine	Fuel	Displacement (L)	Configuration	Brakes
BV	Cummins ISB	Diesel	5.9	I-6	Air
BW	Cummins ISB	Diesel	5.9	I-6	Hydraulic
BX	Cummins ISB	Diesel	5.9	I-6	Air/Hydraulic
BY	Cummins B5.9	Propane	5.9	I-6	Air
BZ	Cummins B5.9	Propane	5.9	I-6	Hydraulic
B1	Cummins B5.9	Propane	5.9	I-6	Air/Hydraulic
B2	Cummins B5.9	Natural Gas	5.9	I-6	Air
B3	Cummins B5.9	Natural Gas	5.9	I-6	Hydraulic
B4	Cummins B5.9	Natural Gas	5.9	I-6	Air/Hydraulic
B5	Cummins C8.3	Natural Gas	8.3	I-6	Air
B6	Cummins C8.3	Natural Gas	8.3	I-6	Hydraulic
B7	Cummins C8.3	Natural Gas	8.3	I-6	Air/Hydraulic
B8	Detroit Series 50	Diesel	8.5	I-4	Air
B9	Detroit Series 50	Diesel	8.5	I-4	Hydraulic
B0	Detroit Series 50	Diesel	8.5	I-4	Air/Hydraulic
CA	Detroit Series 55	Diesel	12.0	I-6	Air
CB	Detroit Series 55	Diesel	12.0	I-6	Hydraulic
CC	Detroit Series 55	Diesel	12.0	I-6	Air/Hydraulic
CD	Detroit Series 60	Diesel	11.1	I-6	Air
CE	Detroit Series 60	Diesel	11.1	I-6	Hydraulic
CF	Detroit Series 60	Diesel	11.1	I-6	Air/Hydraulic
CG	Detroit Series 60	Diesel	12.7	I-6	Air
CH	Detroit Series 60	Diesel	12.7	I-6	Hydraulic
CJ	Detroit Series 60	Diesel	12.7	I-6	Air/Hydraulic
CK	Detroit Series 60	Diesel	14.0	I-6	Air
CL	Detroit Series 60	Diesel	14.0	I-6	Hydraulic
CM	Detroit Series 60	Diesel	14.0	I-6	Air/Hydraulic
CN	Mercedes-Benz MBE900	Diesel	4.3	I-4	Air
CP	Mercedes-Benz MBE900	Diesel	4.3	I-4	Hydraulic
CR	Mercedes-Benz MBE900	Diesel	4.3	I-4	Air/Hydraulic
CS	Mercedes-Benz MBE900	Diesel	6.4	I-6	Air
CT	Mercedes-Benz MBE900	Diesel	6.4	I-6	Hydraulic
CU	Mercedes-Benz MBE900	Diesel	6.4	I-6	Air/Hydraulic

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VIN Positions 7 and 8 (Engine, Brakes)					
Code	Engine	Fuel	Displacement (L)	Configuration	Brakes
CV	Mercedes-Benz MBE4000	Diesel	12.0	I-6	Air
CW	Mercedes-Benz MBE4000	Diesel	12.0	I-6	Hydraulic
CX	Mercedes-Benz MBE4000	Diesel	12.0	I-6	Air/Hydraulic
CY	Cummins ISL	Diesel	8.3	I-6	Air
CZ	Cummins ISL	Diesel	8.3	I-6	Hydraulic
C1	Cummins ISL	Diesel	8.3	I-6	Air/Hydraulic
C2	Cummins B3.9	Diesel	3.9	I-4	Air
C3	Cummins B3.9	Diesel	3.9	I-4	Hydraulic
C4	Cummins B3.9	Diesel	3.9	I-4	Air/Hydraulic
C5	Cummins ISB 3.9	Diesel	3.9	I-4	Air
C6	Cummins ISB 3.9	Diesel	3.9	I-4	Hydraulic
C7	Cummins ISB 3.9	Diesel	3.9	I-4	Air/Hydraulic
00	No Engine	—	—	—	—

Table 5, VIN Positions 7 and 8 (Engine, Brakes)

VIN Position 10 (Model Year)	
Code	Model Year
Y	2000
1	2001
2	2002
3	2003
4	2004
5	2005
6	2006
7	2007

Table 6, VIN Position 10 (Vehicle Model Year)

VIN Position 11 (Build Location)	
Code	Build Location
A	St. Thomas, Ontario
H	Mt. Holly, North Carolina

Table 7, VIN Position 11 (Build Location)