

When to do it?

All vehicles are adjusted for low altitude as delivered from the factory.

Certain new vehicles sold for principal use at high altitude (82 and later) must be adjusted before delivery to the customer. This is to be done by the dealer and should be considered part of the normal Pre-Delivery Service.

Owners of vehicles 1968-1981 operating vehicles principally in high altitude areas (above 4000 ft) are recommended to adjust their vehicles for high altitude operation.

NOTE: Vehicles adjusted for high altitude operation must be re-adjusted to low altitude specifications when the vehicle is returned to continuous low altitude operation.

How to do it?

Carburetor engines (B20B, B30A) see page 4

Fuel injection engines (B20F, B21F, B27/28F, B30F) see page 5

Diesel engines (D24) see page 8

Counties wholly situated above 1219 meters (4000 feet)

Volvo Dealers located in those counties who are predominantly affected by the regulations are identified by Dealer Number.

State of Arizona

State of Idaho

State of Montana

Apache

Bannock

Beaverhead

Navejo

Bear Lake

Deer Lodge

State of Colorado

Bingham

Gallatin

Adams

Jefferson (4377)

Blaine

Jefferson

Alamosa

Lahe

Bonneville

Madison

Arapahoe (4370)

La Plata

Butte

Meagher

Archuleta

Larimer (4322)

Camas

Park

Boulder (4336)

Las Animes

Caribou

Silver Bow

Chaffee

Lincoln

Cassia

Clear Creek

Mesa (4356)

Clark

Conejos

Mineral

Custer

Costilla

Moffat

Franklin

Crowley

Montemuma

Fremont

Custer

Montrose

Jefferson

Dolores

Morgan

Modison

Delta

Ouray

Minidoka

Denver (4323)

Park

Oneida

Douglas

Pikin

Power

Eagle

Pueblo (4321)

Teton

Elbert

Rio Blanco

Valley

El Paso (4380)

Rio Grande

Freemont

Routt

Garfield

Saguache

Gilpin

San Juan

Grand

San Miguel

Gunnison

Summit

Hinsdale

Teller

Huerfano

Washington

Jackson

Weld (4335)

Counties wholly situated above 1219 meters (4000 feet) (Con't)State of Nebraska

Banner
Kimball
Sioux

State of Nevada

Carson City
Douglas
Elko
Esmeralda
Eureka
Humboldt
Lander
Lyon
Mineral
Storey
White Pine

State of New Mexico

Bernalillo (4320)
Catron
Colfax
Curry
De Baca
Grant
Guadalupe
Harding
Lincoln
Los Alamos
Luna
McKinley
Mora
Rio Arriba
Sandoval
San Juan
San Miguel
Sante Fe (4385)
Sierra
Socorro
Taos
Torrance
Union
Valencia

State of Oregon

Lake

State of Utah

Beaver
Box Elder
Cache
Carbon
Daggett
Davis
Duchesne
Emery
Grand
Iron
Jaub
Kane
Millard
Morgan
Piute
Rich
Salt Lake (5281)
San Juan
Sanpete
Sevier
Summit
Tooele
Unitah
Utah
Wasatch
Wayne
Weber (5278)

State of Wyoming

Albany
Carbon
Converse
Fremont
Goshen
Hot Springs
Johnson
Laramie
Lincoln
Natrona
Niobrara
Park
Platte
Sublette
Sweetwater
Teton
Unita
Weston

3/8
3/8
5-3

Altitude adjustments

Carburetor engines (B20B, B30A)



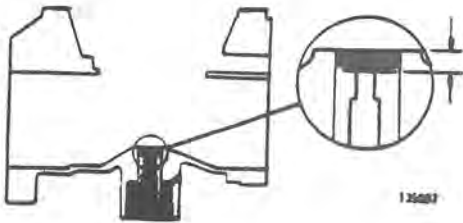
HIGH ALTITUDE



LOW ALTITUDE 135010

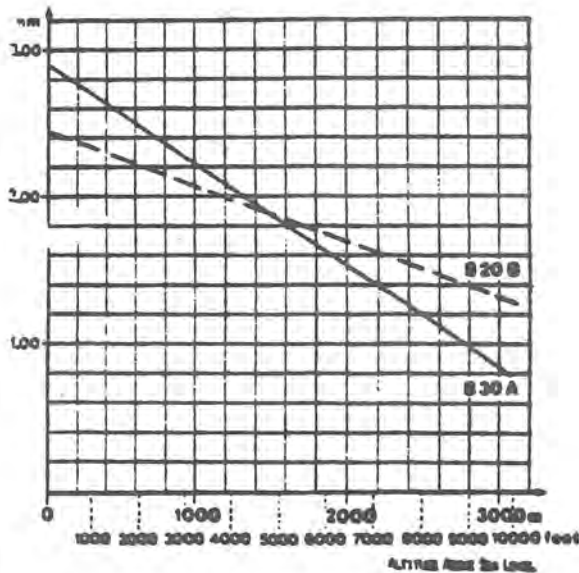
Adjust the vehicle at the actual altitude it will be driven

High altitude adjustment of carbureted engines means that the specified values for idle-Co and idle speed should be checked and if necessary adjusted at the actual altitude the vehicle is to be operated.



135007

If specified values cannot be met (i.e., vehicles that have been driven many miles) this can mean that the fuel metering needle and/or jet are worn. In this case they must be replaced before proper adjustments can be made.



NOTE: When replacing the fuel jet, the basic adjustment varies according to altitude, see diagram.

THIS VEHICLE IS MODIFIED FOR HIGH ALTITUDE DRIVING



135067

Label

Vehicles that have been adjusted for high altitudes must also have a label applied in the engine compartment.

Clean the area with a suitable agent and apply the label, part no. 1313496-0.

NOTE: When an engine is re-adjusted for low altitude the label must be removed.

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Altitude adjustments

Fuel injection engines (B20F, B21F, B27/28F, B30F)



HIGH ALTITUDE



LOW ALTITUDE 135010

Adjust the vehicle at the actual altitude it will be driven

High altitude adjustment of fuel injected engines means that the specified values of idle-CO and idle speed should be checked and if necessary adjusted at the actual altitude the vehicle is to be driven at.

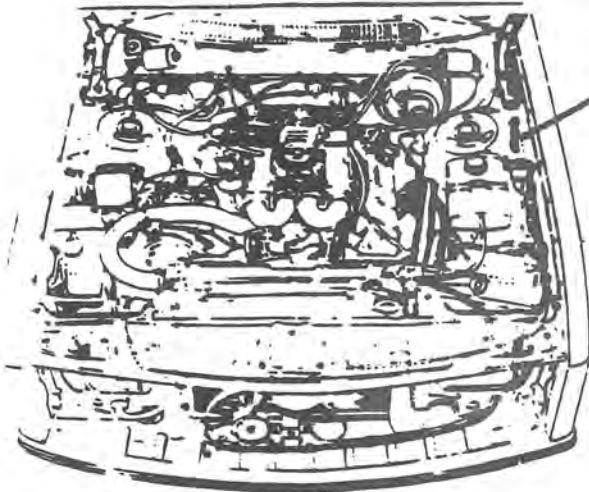
On engine B28F Federal 1981-82 further measures must however be taken, see below.

Label

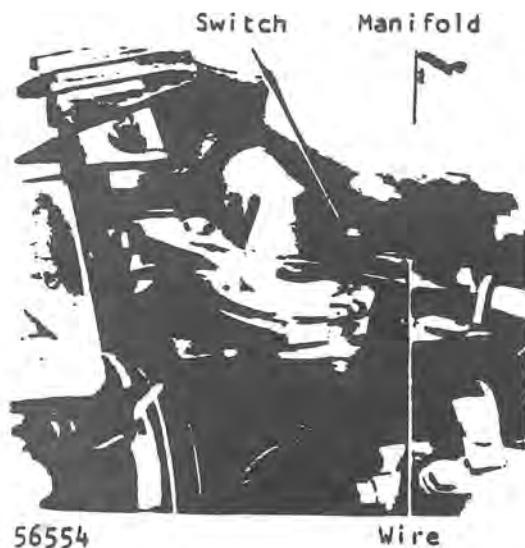
Vehicles that have been adjusted for high altitudes must also have a modification label applied in the engine compartment.

Clean the area with a suitable agent and apply the label, part no. 1313496-0.

NOTE: When an engine is re-adjusted for low altitude the label must be removed.



B28F 1981-82



High altitude: disconnect full load enrichment

- Remove black wire from micro-switch located adjacent to throttle control pulley (see illustration)
- Insulate connector using electrical tape or equivalent and secure to wiring harness.

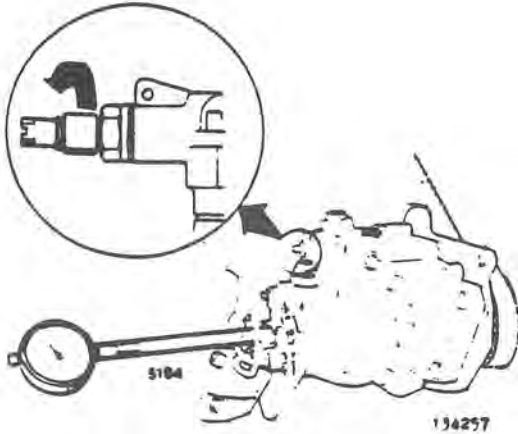
CAUTION:

Do not allow the connector to contact switch terminals.

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Altitude adjustments

Diesel engines D24 1981-82



High altitude adjustments

Change fuel injection pump setting. Two separate adjustments are required.

For each 3,300 feet (1,000 meters) increase in altitude:

- increase injection timing by 0.07mm (distributor plunger stroke at top dead center)
- reduce fuel injection amount by 2.3cc/stroke. (This corresponds to counterclockwise movement of the screw approx. 35 degrees.)

Example: for an altitude of 2,000 meters (6,600 feet) above sea level:

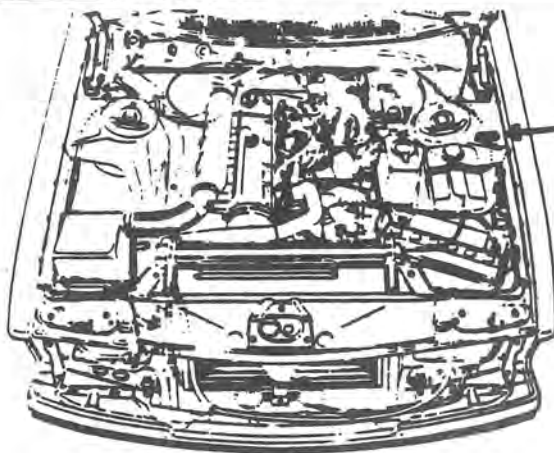
Calculate injection timing setting

Normal setting + $\frac{(2000 \text{ m} \times 0.07)}{1000 \text{ m}}$ = High altitude setting

Normal setting for 1980-81 = 0.75mm
Normal setting for 1982 = 0.85mm

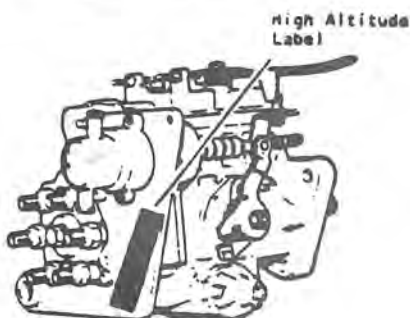
Calculate fuel amount adjustment screw setting

$\frac{2000 \text{ m} \times 35 \text{ degrees}}{1000 \text{ m}}$ = 70 degrees (the screw should be turned 70 degrees counterclockwise)



**THIS VEHICLE IS MODIFIED
FOR HIGH ALTITUDE DRIVING**

Vehicles that have been adjusted for high altitude must also have two labels applied in the engine compartment. Clean the area with a suitable agent and apply the labels, part no. 131496-0.



LOW altitude adjustment

Re-adjust injection timing and fuel amount adjusting screw setting to normal settings.

Remove labels.