INTRODUCTION

How to Use This Manual

This manual is divided into multiple sections. The first page of each section is marked with a black tab that lines up with its corresponding thumb index tab on this page and the back cover. You can quickly find the first page of each section without looking through a full table of contents. The symbols printed at the top corner of each page can also be used as a quick reference system.
Each section includes:

1. A table of contents, or an exploded view index showing:
   - Parts disassembly sequence.
   - Bolt torques and thread sizes.
   - Page references to descriptions in text.
2. Disassembly/assembly procedures and tools.
3. Inspection.
4. Testing/troubleshooting.
5. Repair.
6. Adjustments.

Safety Messages

Your safety, and the safety of others, is very important. To help you make informed decisions, we have provided safety messages, and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this vehicle. You must use your own good judgment.

You will find important safety information in a variety of forms including:

- **Safety Labels** — on the vehicle.
- **Safety Messages** — preceded by a safety alert symbol ⚠ and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

⚠ DANGER	You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.
⚠ WARNING	You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.
⚠ CAUTION	You CAN be HURT if you don't follow instructions.

- **Instructions** — how to service this vehicle correctly and safely.

As you read this manual, you will find information that is preceded by a NOTICE symbol. The purpose of this message is to help prevent damage to your vehicle, other property, or the environment.

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Specifications apply to Canada

HONDA MOTOR CO., LTD.
Service Publication Office

As sections with * include SRS components; special precautions are required when servicing.

General Information

Chassis and Paint Codes

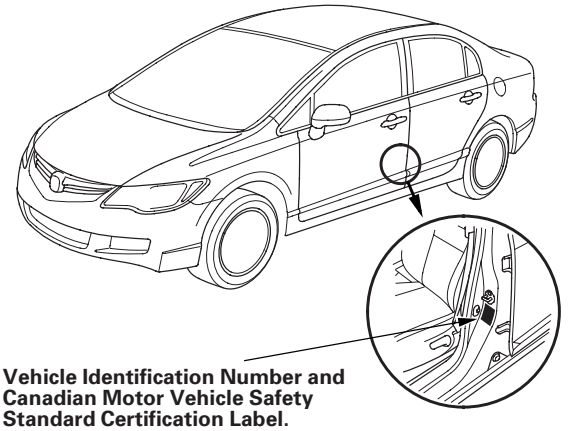
'06 Model

Vehicle Identification Number

2HH FD5 6 5 * 6 H 200001

a b c d e f g h

a. Manufacturer, Make and Type of Vehicle
2HH: Honda of Canada Mfg.,
Honda Canada Inc.
Acura passenger vehicle
b. Line, Body and Engine Type
FD5: Acura CSX/K20Z2
c. Body Type and Transmission Type
5: 4-door Sedan/5-speed Manual
6: 4-door Sedan/5-speed Automatic
d. Vehicle Grade (Series)
5: TOURING
7: PREMIUM
e. Check Digit
f. Model Year
6: '06
g. Factory Code
H: Alliston, Ontario Factory in Canada
h. Serial Number



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification Label.

Engine Number

K20Z2 - 1300001

a b

a. Engine Type
K20Z2: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
b. Serial Number

Transmission Number

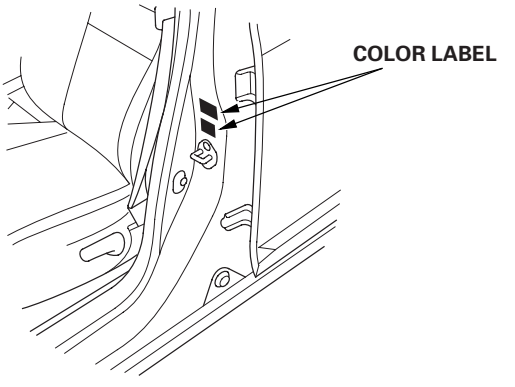
RPD6 - 1000001

a b

a. Transmission Type
RPD6: 5-speed Manual
MPMA: 5-speed Automatic
b. Serial Number

Paint Code

Code	Color
NH-578	Taffeta White
NH-700M	Alabaster Silver Metallic
NH-701M	Galaxy Gray Metallic
B-92P	Nighthawk Black Pearl
B-536P	Royal Blue Pearl
B-537M	Neutron Blue Metallic
YR-557P	Habanero Red Pearl



'07 Model

Vehicle Identification Number

2HH FD5 6 5 * 7 H 200001

a b c d e f g h

a. Manufacturer, Make and Type of Vehicle
2HH: Honda of Canada Mfg.,
Honda Canada Inc.
Acura passenger vehicle

b. Line, Body and Engine Type
FD5: Acura CSX/K20Z2, K20Z3

c. Body Type and Transmission Type
5: 4-door Sedan/5-speed Manual, 6-speed Manual
6: 4-door Sedan/5-speed Automatic

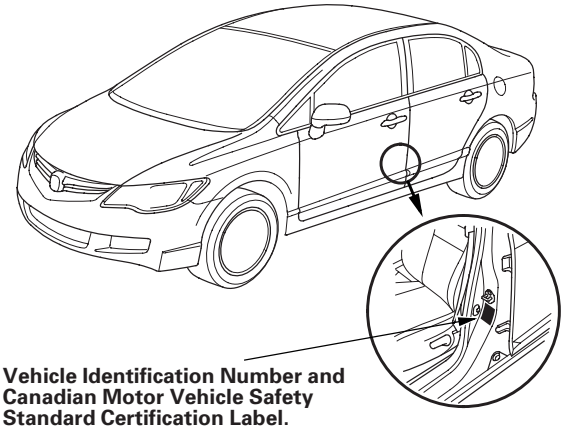
d. Vehicle Grade (Series)
5: TOURING
7: PREMIUM
9: TYPE S

e. Check Digit

f. Model Year
7: '07

g. Factory Code
H: Alliston, Ontario Factory in Canada

h. Serial Number
200001—: K20Z2 engine model
250001—: K20Z3 engine model



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification Label.

Engine Number

K20Z2 - 2300001

a b

a. Engine Type
K20Z2: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
K20Z3: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine

b. Serial Number
2300001—: K20Z2
2000001—: K20Z3

Transmission Number

RPD5 - 1500001

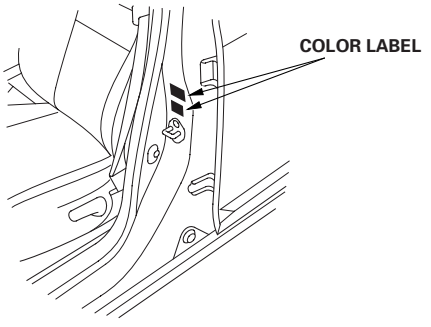
a b

a. Transmission Type
RPD5: 5-speed Manual
PNN3: 6-speed Manual
MPMA: 5-speed Automatic

b. Serial Number
1000001—: PNN3
1500001—: RPD5
2000001—: MPMA

Paint Code

Code	Color
NH-578	Taffeta White
NH-700M	Alabaster Silver Metallic
NH-701M	Galaxy Gray Metallic
B-92P	Nighthawk Black Pearl
B-529P	Fiji Blue Pearl
B-536P	Royal Blue Pearl
B-537M	Neutron Blue Metallic
YR-557P	Habanero Red Pearl



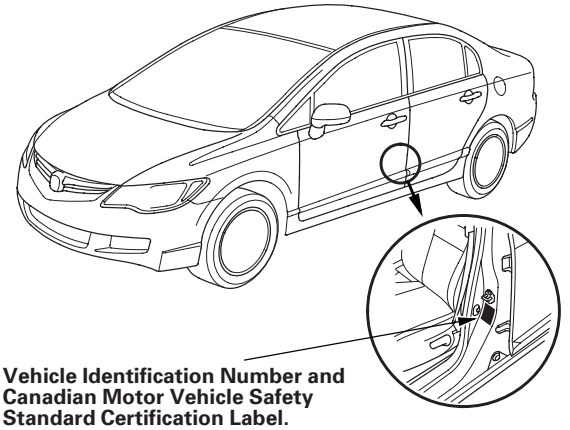
Chassis and Paint Codes (cont'd)

'08 Model

Vehicle Identification Number

2HH FD5 6 5 * 8 H 200001
a b c d e f g h

a. Manufacturer, Make and Type of Vehicle
2HH: Honda of Canada Mfg.,
Honda Canada Inc.
Acura passenger vehicle
b. Line, Body and Engine Type
FD5: Acura CSX/K20Z2, K20Z3
c. Body Type and Transmission Type
5: 4-door Sedan/5-speed Manual, 6-speed Manual
6: 4-door Sedan/5-speed Automatic
d. Vehicle Grade (Series)
5: CSX
7: PREMIUM
9: TYPE S
e. Check Digit
f. Model Year
8: '08
g. Factory Code
H: Alliston, Ontario Factory in Canada
h. Serial Number
200001—: K20Z2 engine model
250001—: K20Z3 engine model



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification Label.

Engine Number

K20Z2 - 3300001
a b

a. Engine Type
K20Z2: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
K20Z3: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
b. Serial Number
3300001—: K20Z2
3000001—: K20Z3

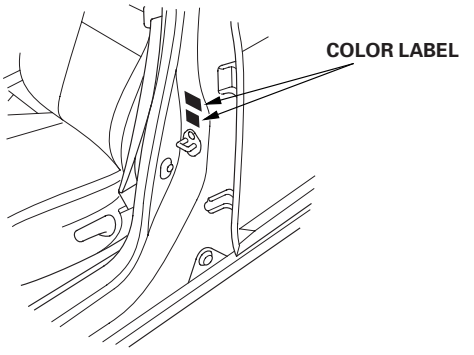
Transmission Number

RPD5 - 2500001
a b

a. Transmission Type
RPD5: 5-speed Manual
PNN3: 6-speed Manual
MPMA: 5-speed Automatic
b. Serial Number
2000001—: PNN3
2500001—: RPD5
3000001—: MPMA

Paint Code

Code	Color
NH-578	Taffeta White
NH-700M	Alabaster Silver Metallic
NH-701M	Galaxy Gray Metallic
B-92P	Nighthawk Black Pearl
B-529P	Fiji Blue Pearl
B-536P	Royal Blue Pearl
R-525P	New Red Pearl



’09 Model

Vehicle Identification Number

2HH FD5 6 5 * 9 H 200001

a b c d e f g h

a. Manufacturer, Make and Type of Vehicle
2HH: Honda of Canada Mfg.,
Honda Canada Inc.
Acura passenger vehicle

b. Line, Body and Engine Type
FD5: Acura CSX/K20Z2, K20Z3

c. Body Type and Transmission Type
5: 4-door Sedan/5-speed Manual, 6-speed Manual
6: 4-door Sedan/5-speed Automatic

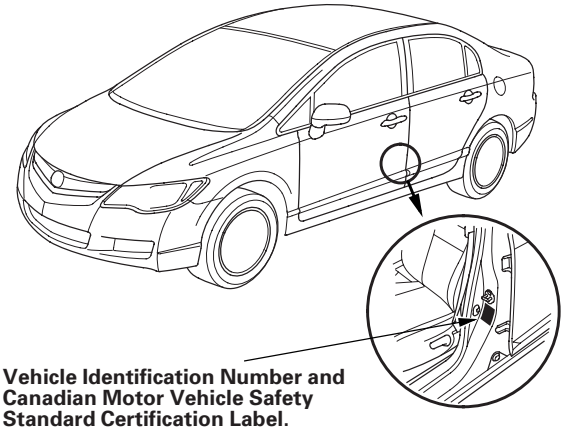
d. Vehicle Grade (Series)
5: CSX
7: TECH PKG
9: TYPE S

e. Check Digit

f. Model Year
9: ’09

g. Factory Code
H: Alliston, Ontario Factory in Canada

h. Serial Number
200001—: K20Z2 engine model
250001—: K20Z3 engine model



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification Label.

Engine Number

K20Z2 - 5300001

a b

a. Engine Type
K20Z2: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
K20Z3: 2.0 L DOHC i-VTEC Sequential Multiport Fuel-injected engine

b. Serial Number
5300001—: K20Z2
4000001—: K20Z3

Transmission Number

SPTM - 4000001

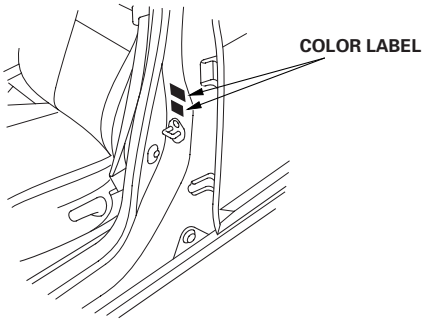
a b

a. Transmission Type
SPTM: 5-speed Manual
SPNM: 6-speed Manual
MPMA: 5-speed Automatic

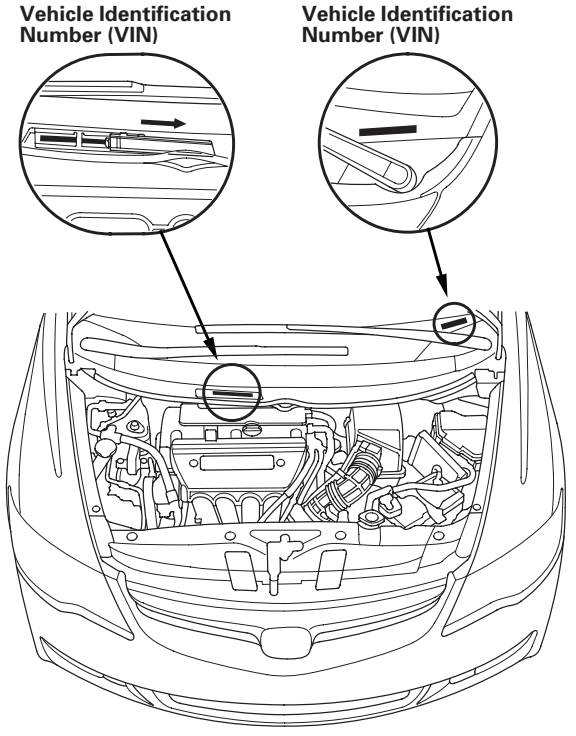
b. Serial Number
4000001—: SPTM
4000001—: SPNM
4000001—: MPMA

Paint Code

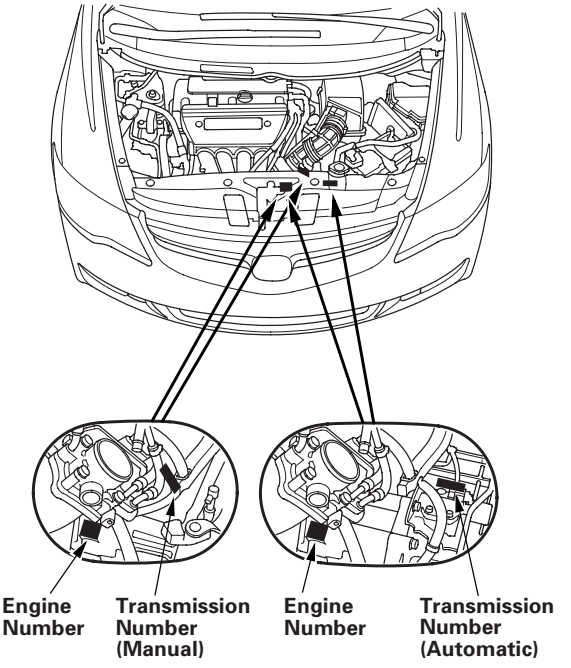
Code	Color
NH-578	Taffeta White
NH-700M	Alabaster Silver Metallic
NH-731P	Crystal Black Pearl
NH-737M	Polished Metal Metallic
B-561P	Dyno Blue Pearl
YR-578M	Urban Titanium Metallic
B-536P	Royal Blue Pearl
R-525P	New Red Pearl



Identification Number Locations



K20Z2 engine Model:



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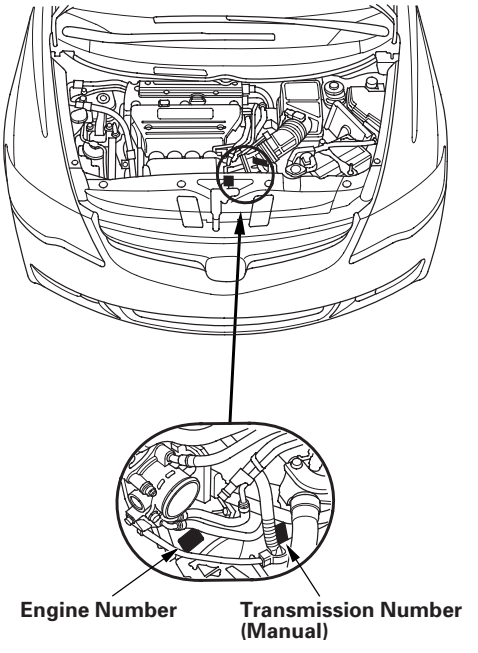
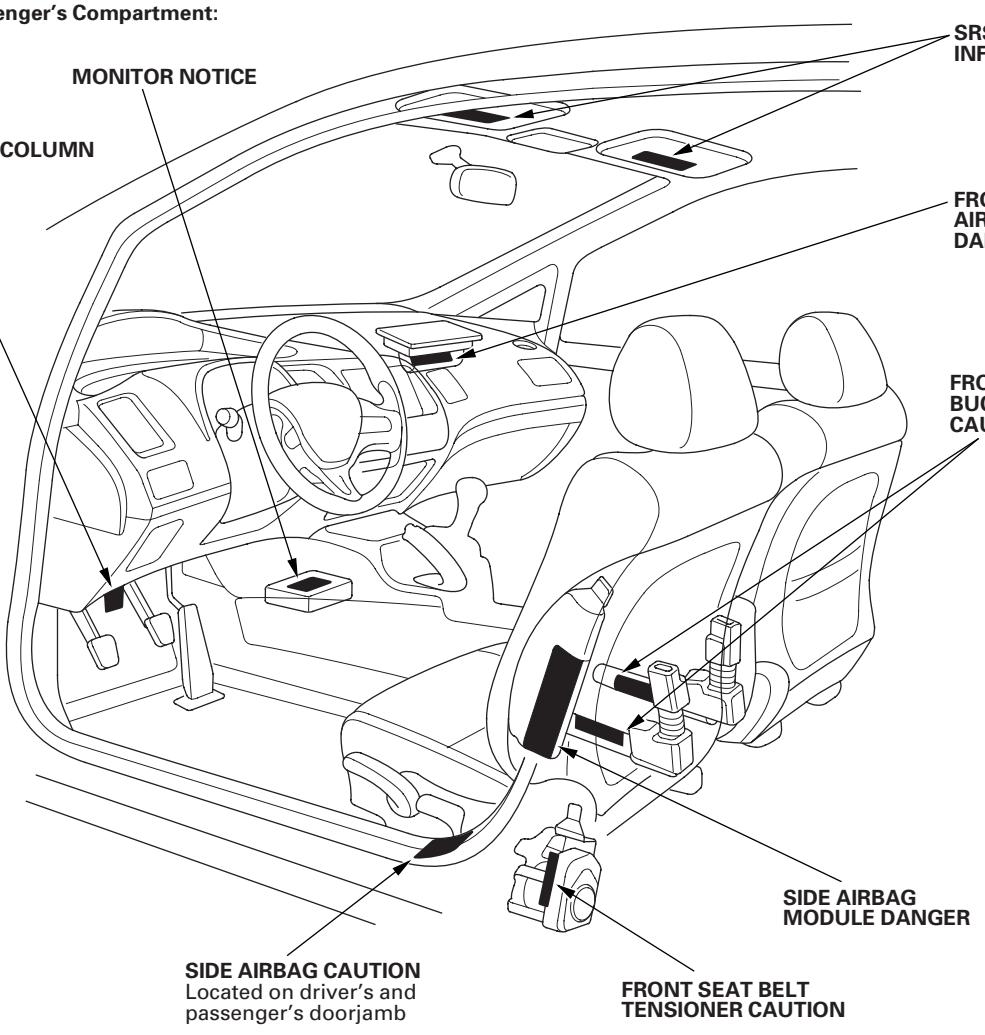
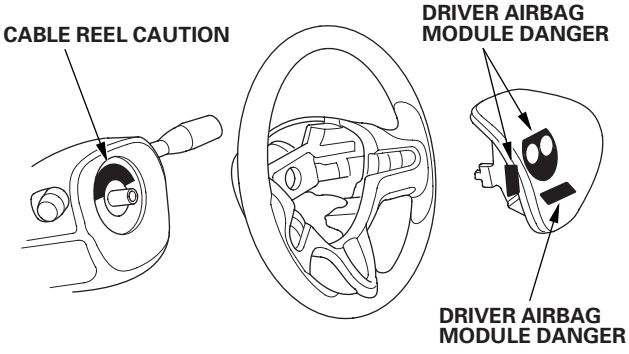


Danger/Warning/Caution Label Locations

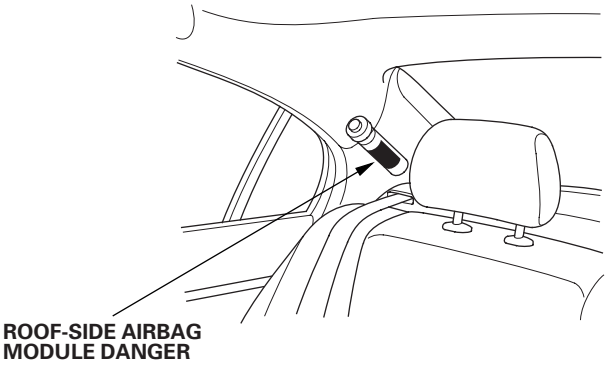
Front Passenger's Compartment:



Steering Wheel:



Rear Passenger's Compartment:



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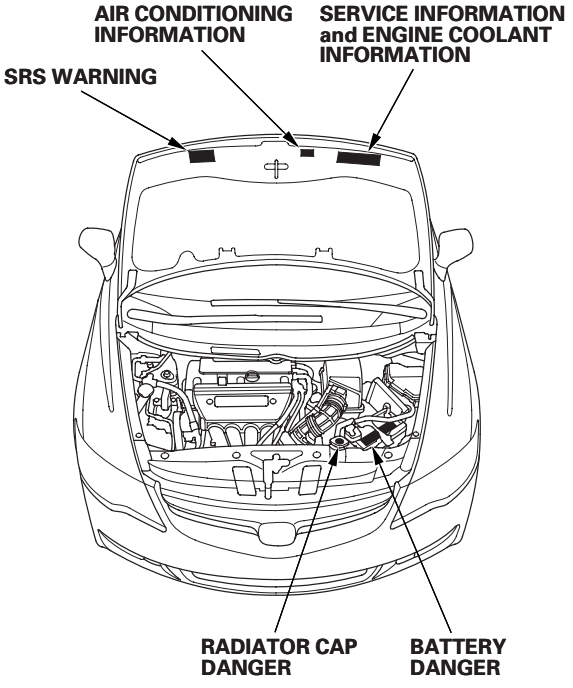
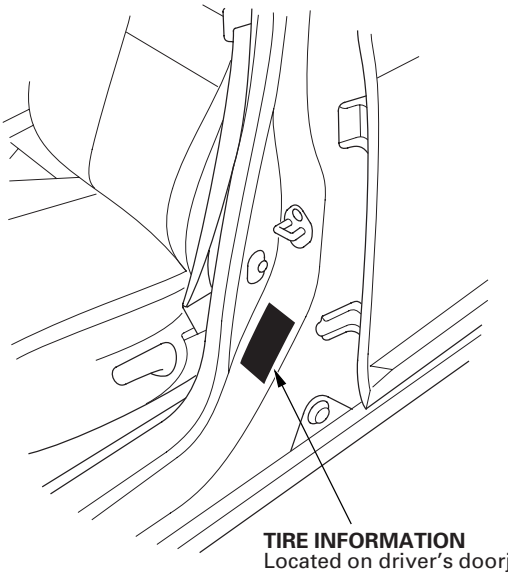
Danger/Warning/Caution Label Locations (cont'd)



Doorjamb Area



TIRE INFORMATION
Located on driver's doorjamb

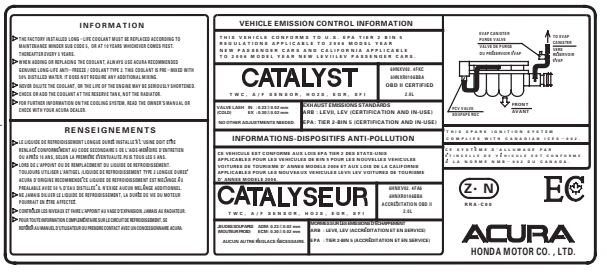
Under-hood Emission Control Label

Emission Group Identification

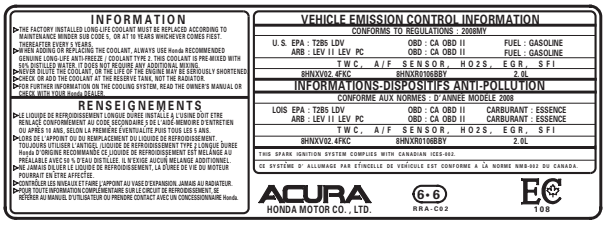
K20Z2 engine Model:

Example:

'06-07 Models



'08-09 Models



'06 Model
THIS VEHICLE CONFORMS TO U.S. EPA TIER 2 BIN 5 REGULATIONS APPLICABLE TO 2006 MODEL YEAR NEW PASSENGER CARS AND CALIFORNIA REGULATIONS APPLICABLE TO 2006 MODEL YEAR NEW LEV II LEV PASSENGER CARS.

'07 Model
THIS VEHICLE CONFORMS TO U.S. EPA TIER 2 BIN 5 REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW PASSENGER CARS AND CALIFORNIA REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LEV II LEV PASSENGER CARS.

'08 Model
CONFORMS TO REGULATIONS: 2008 MY

'09 Model
CONFORMS TO REGULATIONS: 2009 MY

Test Group and Evaporative Family

Test Group:

9 HNX V 02.0 VA9
a b c d e

- **a. Model Year**
  6: '06
  7: '07
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  V: LDV
- **d. Displacement Group**
- **e. Sequence Characters**
  FKC: '06 model, '08 model
  HKC: '07 model
  VA9: '09 model

Evaporative Family:

9 HNX R 0106 VEA
a b c d e

- **a. Model Year**
  6: '06
  7: '07
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  R: EVAP/ORVR
- **d. Canister Working Capacity Group**
- **e. Sequence Characters**
  BBA: '06 model
  BBY: '07 model, '08 model
  VEA: '09 model

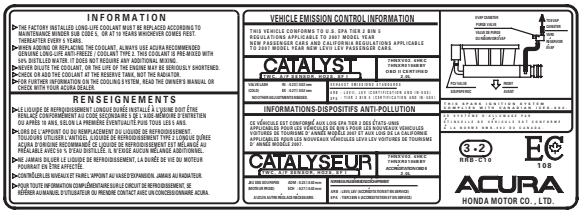
Under-hood Emission Control Label (cont'd)

Emission Group Identification

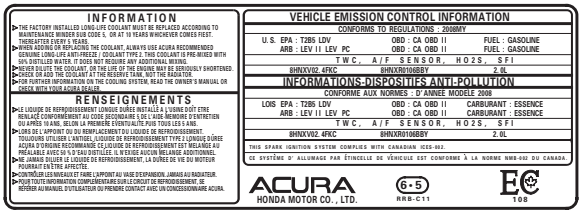
K20Z3 engine Model:

Example:

'07 Model



'08-09 Models



'07 Model
THIS VEHICLE CONFORMS TO U.S. EPA TIER 2 BIN 5 REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW PASSENGER CARS AND CALIFORNIA REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LEV II LEV PASSENGER CARS.

'08 Model
CONFORMS TO REGULATIONS: 2008 MY

'09 Model
CONFORMS TO REGULATIONS: 2009 MY

Test Group and Evaporative Family

Test Group:

9 HNX V 02.0 VA9
a b c d e

- **a. Model Year**
  7: '07
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  V: LDV
- **d. Displacement Group**
- **e. Sequence Characters**
  HKC: '07 model
  FKC: '08 model
  VA9: '09 model

Evaporative Family:

9 HNX R 0106 VEA
a b c d e

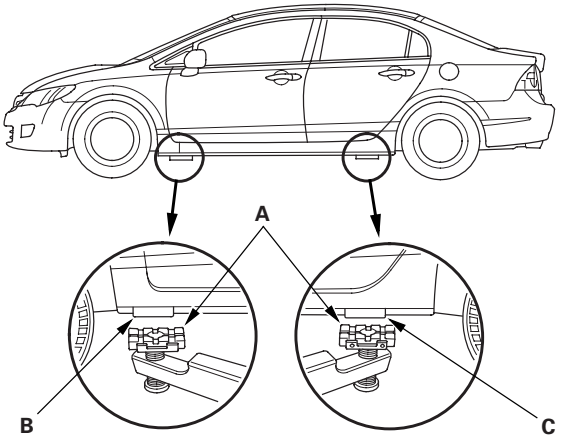
- **a. Model Year**
  7: '07
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  R: EVAP/ORVR
- **d. Canister Working Capacity Group**
- **e. Sequence Characters**
  BBY: '07 model, '08 model
  VEA: '09 model

Lift and Support Points

NOTE: If you are going to remove heavy components such as suspension or the fuel tank from the rear of the vehicle, first support the front of the vehicle with tall safety stands. When substantial weight is removed from the rear of the vehicle, the center of gravity can change, causing the vehicle to tip forward on the lift.

Vehicle Lift

1. Position the lift blocks (A) under the vehicle's front support points (B) and rear support points (C).



2. Raise the lift a few inches, and rock the vehicle gently to be sure it is firmly supported.

3. Raise the lift to its full height, and inspect the vehicle support points for solid contact with the lift blocks.

Safety Stands

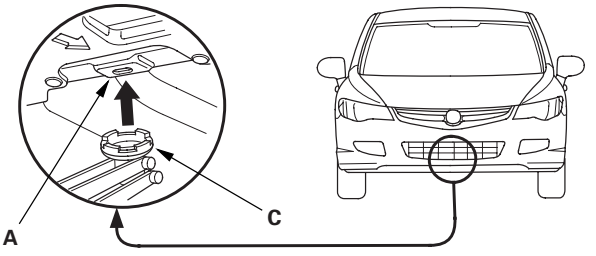
To support the vehicle on safety stands, use the same support points as for a vehicle lift. Always use safety stands when working on or under any vehicle that is supported only by a jack.

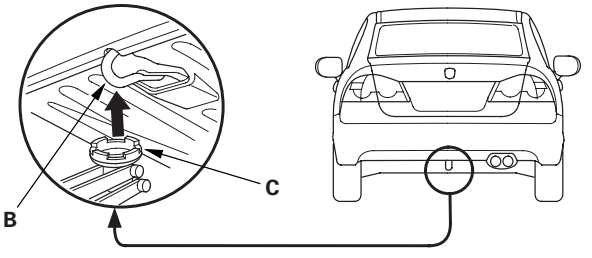
Floor Jack

1. When lifting the front of the vehicle, set the parking brake. When lifting the rear of the vehicle, put the shift lever in reverse for manual transmission, or in P for automatic transmission.

2. Block the wheels that are not being lifted.

3. Position the floor jack under the front jacking bracket (A) or the rear jacking bracket (B). Center the jacking bracket on the jack lift platform (C), and jack up the vehicle high enough to fit the safety stands under it.





4. Position the safety stands under the support points, and adjust them so the vehicle is level.

5. Lower the vehicle onto the stands.

Towing

If the vehicle needs to be towed, call a professional towing service. Never tow the vehicle behind another vehicle with a rope or chain. It is very dangerous.

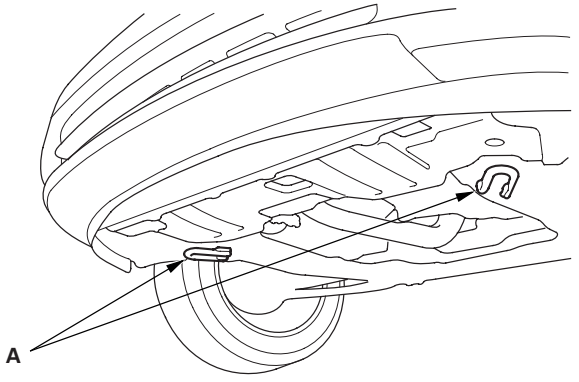
Emergency Towing
There are three popular methods of towing a vehicle.

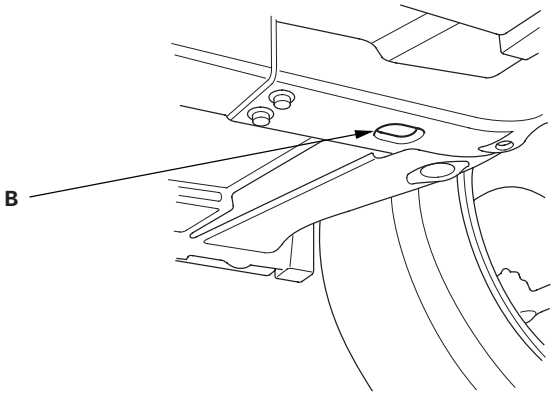
Flat-bed Equipment — The operator loads the vehicle on the back of a truck. **This is the best way of transporting the vehicle.**

To accommodate flat-bed equipment, the vehicle is equipped with front towing hooks (A), front tie down hook slots (B), rear towing hook (C), and rear tie down hook slots (D).

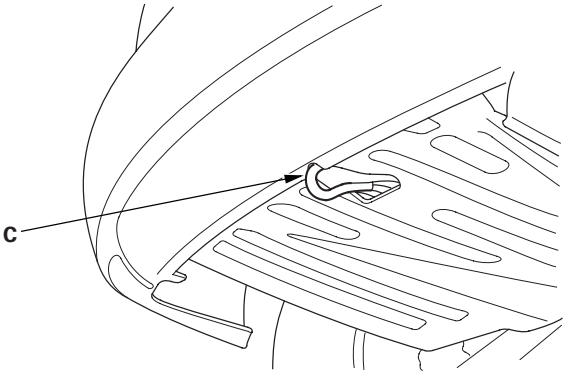
The rear towing hook can be used with a winch to pull the vehicle onto the truck, and the tie down hook slots can be used to secure the vehicle to the truck.

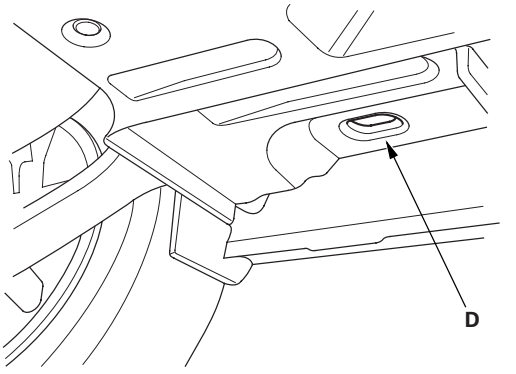
Front:





Rear:





Wheel Lift Equipment — The tow truck uses two pivoting arms that go under the tires (front or rear) and lift them off the ground. The other two wheels remain on the ground. **This is an acceptable way of towing the vehicle.**

Sling-type Equipment — The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or the suspension, and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted. **This method of towing the vehicle is unacceptable.**

If the vehicle cannot be transported by a flat-bed, it should be towed with the front wheels off the ground. If the vehicle is damaged, and must be towed with the front wheels on the ground, or with all four wheels on the ground, do this:

Manual Transmission
- Release the parking brake.
- Shift the transmission to neutral.
- Leave the ignition switch in ACCESSORY (I) so the steering wheel does not lock.
- Make sure all accessories are turned off to minimize current battery draw.

Automatic Transmission
- Release the parking brake.
- Start the engine.
- Shift to D, then to N.
- Turn off the engine.
- Leave the ignition switch in ACCESSORY (I) so the steering wheel does not lock.
- Make sure all accessories are turned off to minimize current battery draw.

It is best to tow the vehicle no farther than 80 km (50 miles), and keep the speed below 55 km/h (35 mph).

NOTICE
- Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you cannot shift the transmission or start the engine (automatic transmission), the vehicle must be transported on a flat-bed.
- Trying to lift or tow the vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

Parts Marking

To deter vehicle theft, certain major components are marked with the vehicle identification number (VIN). Original parts have self-adhesive labels. Replacement body parts have generic self-adhesive labels. These labels should not be removed. The original engine or transmission VIN plates are not transferable to the replacement engine or transmission.

NOTE: Be careful not to damage the parts marking labels during body repair. Mask the labels before repairing the part.

Specifications

Standards and Service Limits

Design Specifications

Standards and Service Limits

Engine Electrical

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1—3—4—2	
Spark plug	Type (K20Z2)		DENSO: SKJ20DR-M11	
	Type (K20Z3)		DENSO: SK22PR-M11S	
	Gap		1.0—1.1 mm (0.039—0.043 in.)	———
Ignition timing	At idle Check the *red* mark	M/T (in neutral), A/T (in N or P)	8±2 °BTDC	
Drive belt	Tension		Auto-tensioner	
Alternator	Output	At 13.5 V and normal engine temperature	105 A	
	Coil (rotor) resistance	20 ℃ (68 ℉)	3.2 —4.0 Ω	
	Slip ring O.D.		14.4 mm (0.57 in.)	14.0 mm (0.55 in.)
	Brush length		10.5 mm (0.41 in.)	1.5 mm (0.06 in.)
	Brush spring tension		3.2 N (0.33 kgf, 0.7 lbf)	
Starter	Output		1.6 kW	
	Commutator mica depth		0.40—0.50 mm (0.016—0.020 in.)	0.15 mm (0.006 in.)
	Commutator runout		0.02 mm (0.0008 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.0—28.1 mm (1.102—1.106 in.)	27.5 mm (1.083 in.)
	Brush length		11.1—11.5 mm (0.44—0.45 in.)	4.3 mm (0.17 in.)

Engine Assembly

Item	Measurement	Qualification	Standard or New
Compression	Pressure Check the engine with the starter cranking	Minimum	930 kPa (9.5 kgf/cm^2, 135 psi)
		Maximum variation	200 kPa (2.0 kgf/cm^2, 28 psi)

Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		———	0.05 mm (0.002 in.)
	Height		103.95—104.05 mm (4.093—4.096 in.)	———
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in.)	0.4 mm (0.02 in.)
	Camshaft-to-holder oil clearance	No. 1 journal	0.030—0.069 mm (0.001—0.003 in.)	0.15 mm (0.006 in.)
		No. 2, 3, 4, 5 journals	0.060—0.099 mm (0.002—0.004 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.001 in.) max.	0.04 mm (0.002 in.)
	Cam lobe height (K20Z2)	Intake (primary)	34.263 mm (1.3489 in.)	———
		Intake (secondary)	29.638 mm (1.1668 in.)	———
		Exhaust	34.092 mm (1.3422 in.)	———
	Cam lobe height (K20Z3)	Intake (primary)	32.791 mm (1.2910 in.)	———
		Intake (mid)	35.534 mm (1.3990 in.)	———
		Intake (secondary)	32.678 mm (1.2865 in.)	———
		Exhaust (primary)	32.772 mm (1.2902 in.)	———
		Exhaust (mid)	34.768 mm (1.3688 in.)	———
		Exhaust (secondary)	32.661 mm (1.2859 in.)	———
Valve	Clearance (cold) (K20Z2)	Intake	0.21—0.25 mm (0.008—0.010 in.)	———
		Exhaust	0.28—0.32 mm (0.011—0.013 in.)	———
	Clearance (cold) (K20Z3)	Intake	0.21—0.25 mm (0.008—0.010 in.)	———
		Exhaust	0.25—0.29 mm (0.010—0.011 in.)	———
	Stem O.D.	Intake	5.475—5.485 mm (0.2156—0.2159 in.)	5.445 mm (0.214 in.)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in.)	5.420 mm (0.213 in.)
	Stem-to-guide clearance	Intake	0.030—0.055 mm (0.0012—0.0022 in.)	0.08 mm (0.003 in.)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in.)	0.11 mm (0.004 in.)
Valve seat	Width	Intake	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
		Exhaust	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	44.0—44.5 mm (1.73—1.75 in.)	44.7 mm (1.76 in.)
		Exhaust	44.1—44.6 mm (1.74—1.76 in.)	44.8 mm (1.76 in.)
Valve spring	Free length	Intake	NIPPON HATSUJO: 47.57 mm (1.8728 in.)	———
			CHUO HATSUJO: 47.58 mm (1.8732 in.)	
		Exhaust	NIPPON HATSUJO: 49.64 mm (1.954 in.)	———
			CHUO HATSUJO: 49.63 mm (1.954 in.)	
Valve guide	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
	Installed height	Intake	15.2—16.2 mm (0.598—0.638 in.)	———
		Exhaust	15.5—16.5 mm (0.610—0.650 in.)	———
Rocker arm	Arm-to-shaft clearance (K20Z2)	Intake	0.025—0.052 mm (0.0010—0.0020 in.)	0.08 mm (0.003 in.)
		Exhaust	0.018—0.056 mm (0.0007—0.0022 in.)	0.08 mm (0.003 in.)
	Arm-to-shaft clearance (K20Z3)	Intake	0.025—0.052 mm (0.0010—0.0020 in.)	0.08 mm (0.003 in.)
		Exhaust	0.025—0.052 mm (0.0010—0.0020 in.)	0.08 mm (0.003 in.)

Standards and Service Limits

Engine Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.) max.	0.10 mm (0.004 in.)
	Bore diameter	A or I	86.010—86.020 mm (3.3862—3.3866 in.)	86.070 mm (3.3886 in.)
		B or II	86.000—86.010 mm (3.3858—3.3862 in.)	86.070 mm (3.3886 in.)
	Bore taper		———	0.05 mm (0.002 in.)
	Reboring limit		———	0.25 mm (0.01 in.)
Piston	Skirt O.D. at 11 mm (0.4 in.) from bottom of skirt	No letter or A	85.980—85.990 mm (3.3850—3.3854 in.)	85.930 mm (3.3831 in.)
		Letter B	85.970—85.980 mm (3.3846—3.3850 in.)	85.920 mm (3.3827 in.)
	Clearance in cylinder		0.020—0.040 mm (0.0008—0.0016 in.)	0.05 mm (0.002 in.)
Piston ring	Ring-to-groove clearance (K20Z2)	Top	0.035—0.060 mm (0.0014—0.0024 in.)	0.13 mm (0.005 in.)
		Second	0.030—0.055 mm (0.0012—0.0022 in.)	0.13 mm (0.005 in.)
	Ring-to-groove clearance (K20Z3)	Top	0.045—0.070 mm (0.0018—0.0028 in.)	0.13 mm (0.005 in.)
		Second	0.040—0.065 mm (0.0016—0.0026 in.)	0.13 mm (0.005 in.)
	Ring end gap (K20Z2)	Top	0.20—0.35 mm (0.008—0.014 in.)	0.60 mm (0.024 in.)
		Second	0.40—0.55 mm (0.016—0.022 in.)	0.70 mm (0.028 in.)
		Oil	0.20—0.70 mm (0.008—0.028 in.)	0.80 mm (0.031 in.)
	Ring end gap (K20Z3)	Top	0.20—0.35 mm (0.008—0.014 in.)	0.60 mm (0.024 in.)
		Second	0.50—0.65 mm (0.020—0.026 in.)	0.75 mm (0.030 in.)
		Oil	0.20—0.70 mm (0.008—0.028 in.)	0.80 mm (0.031 in.)
Piston pin	O.D.		21.961—21.965 mm (0.8646—0.8648 in.)	21.953 mm (0.8643 in.)
	Pin-to-piston clearance		−0.005 to +0.002 mm (−0.00020 to +0.00008 in.)	0.005 mm (0.0002 in.)
Connecting rod	Pin-to-rod clearance		0.005—0.015 mm (0.0002—0.0006 in.)	0.02 mm (0.0008 in.)
	Small-end bore diameter		21.970—21.976 mm (0.8650—0.8652 in.)	———
	Large-end bore diameter (K20Z2)		48.0 mm (1.89 in.)	———
	Large-end bore diameter (K20Z3)		51.0 mm (2.01 in.)	———
	End play		0.15—0.30 mm (0.006—0.012 in.)	0.40 mm (0.016 in.)
Crankshaft	Main journal diameter	No. 1, 2, 4, 5 journals	54.984—55.008 mm (2.1648—2.1657 in.)	———
		No. 3 journal	54.976—55.000 mm (2.1644—2.1654 in.)	———
	Rod journal diameter (K20Z2)		44.976—45.000 mm (1.7707—1.7717 in.)	———
	Rod journal diameter (K20Z3)		44.976—45.000 mm (1.7707—1.7717 in.)	———
	Rod/main journal taper		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	Rod/main journal out-of-round		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	End play		0.10—0.35 mm (0.004—0.014 in.)	0.45 mm (0.018 in.)
	Runout		0.03 mm (0.0012 in.) max.	0.04 mm (0.0016 in.)
Crankshaft bearing	Main bearing-to-journal oil clearance	No. 1, 2, 4, 5 journals	0.017—0.041 mm (0.0007—0.0016 in.)	0.050 mm (0.0020 in.)
		No. 3 journal	0.025—0.049 mm (0.0010—0.0019 in.)	0.055 mm (0.0022 in.)
	Connecting rod bearing-to-journal oil clearance (K20Z2)		0.020—0.050 mm (0.0008—0.0020 in.)	0.060 mm (0.0024 in.)
	Connecting rod bearing-to-journal oil clearance (K20Z3)		0.032—0.066 mm (0.0013—0.0026 in.)	0.077 mm (0.0030 in.)

Engine Lubrication

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity (K20Z2)	Engine overhaul	5.3 L (5.6 US qt)	
		Oil change including filter	4.2 L (4.4 US qt)	
		Oil change without filter	4.0 L (4.2 US qt)	
	Capacity (K20Z3)	Engine overhaul	5.5 L (5.8 US qt)	
		Oil change including filter	4.4 L (4.6 US qt)	
		Oil change without filter	4.2 L (4.4 US qt)	
Oil pump	Inner-to-outer rotor clearance		0.06—0.16 mm (0.002—0.006 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor clearance		0.15—0.21 mm (0.006—0.008 in.)	0.23 mm (0.009 in.)
	Pump housing-to-rotor axial clearance		0.035—0.070 mm (0.0014—0.0028 in.)	0.12 mm (0.005 in.)
	Balancer shafts, journal diameter	No. 1 journal, front shaft	19.938—19.950 mm (0.7850—0.7854 in.)	19.92 mm (0.784 in.)
		No. 1 journal, rear shaft	23.938—23.950 mm (0.9424—0.9429 in.)	23.92 mm (0.942 in.)
		No. 2 journal, front and rear shaft	32.949—32.961 mm (1.2972—1.2977 in.)	32.93 mm (1.296 in.)
	Balancer shafts, journal taper		0.005 mm (0.0002 in.) max.	———
	Balancer shafts, end play	Front	0.063—0.108 mm (0.0025—0.0043 in.)	0.14 mm (0.0055 in.)
		Rear	0.063—0.108 mm (0.0025—0.0043 in.)	0.14 mm (0.0055 in.)
	Balancer shafts, shaft-to-bearing clearance	No. 1 journal, front shaft	0.050—0.082 mm (0.0020—0.0032 in.)	0.10 mm (0.004 in.)
		No. 1 journal, rear shaft	0.050—0.082 mm (0.0020—0.0032 in.)	0.10 mm (0.004 in.)
		No. 2 journal, front and rear shaft	0.060—0.120 mm (0.0024—0.0047 in.)	0.15 mm (0.006 in.)
	Balancer shaft bearings, I.D.	No. 1 journal, front shaft	20.000—20.020 mm (0.7874—0.7882 in.)	20.03 mm (0.789 in.)
		No. 1 journal, rear shaft	24.000—24.020 mm (0.9449—0.9457 in.)	24.03 mm (0.946 in.)
		No. 2 journal, front and rear shaft	33.021—33.069 mm (1.3000—1.3019 in.)	33.09 mm (1.303 in.)
	Relief valve, oil pressure with oil temperature at 80 ℃ (176 ℉)	At idle	70 kPa (0.7 kgf/cm^2, 10 psi) min.	
		At 3,000 rpm	300 kPa (3.1 kgf/cm^2, 44 psi) min.	