



Crosby ISD

CDL Study Guide



Front of Vehicle

- ✦ Check under vehicle for any leaks
- ✦ All clearance and warning lights in place, not broken & proper color
- ✦ Windshield is clean, not cracked or broken
- ✦ Windshield wipers are in good condition and working properly
- ✦ Hood is not damaged or broken, in good condition and working properly
- ✦ Headlights must be clear, in place and not broken
- ✦ Turn Signals (Left, Right, & 4 Ways) in place and not broken, color must be amber and working properly. (**Will check later**)

➤ **OPEN HOOD NOW**

Engine Area

- ✦ Coolant level in reservoir is between Hot & Cold marks
- ✦ Oil Level- To check: Pull dip stick out, wipe and return. Level between Add & Full
- ✦ Power Steering Reservoir is between Add & Full
- ✦ Power Steering Pump is **GEAR DRIVEN**; mounted on the left side of motor.
 - Provides assistance to steer vehicle through steering linkage
- ✦ All steering linkage properly mounted and secure
- ✦ Air Compressor is **GEAR DRIVEN** and mounted on left side of motor
 - Provides and maintains AIR in the AIR BRAKE SYSTEM
- ✦ Water Pump is **BELT DRIVEN** and mounted on right front of motor
 - Pumps water to engine for proper cooling
- ✦ Alternator is **BELT DRIVEN** mounted on right side of motor
 - Provides electric power to vehicle
 - Belt has less than $\frac{3}{4}$ inch play
- ✦ Hoses appear to be properly mounted and secure with no leaks

Front Suspension

- ✦ Shocks are properly mounted and secure; not leaking
- ✦ Springs are not broken or missing
 - Reduce wheel and road vibration to improve vehicle control
- ✦ Spring Mounts are properly mounted and secure
- ✦ U-Bolts appear to be tight and not broken

Front Brake

- ✦ Brake hoses or lines are not frayed or broken
 - Carries air to wheel brake assembly
- ✦ Brake Chamber is properly mounted and secure, not broken
 - Converts air pressure to mechanical force to operate wheel brakes



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- ✦ Slack Adjuster & Push Rod properly mounted and secure
 - Provides means for proper brake adjustment
 - 1-inch free travel when released
- ✦ Drums & Linings are not cracked, missing, or broken
 - Linings (¼ inch minimum thickness) rubs the inside of drum to slow vehicle
 - IF DUST COVER IN PLACE, CANNOT OBSERVE THICKNESS OF LININGS PROPERLY

Front Wheel

- ✦ Tires are **INFLATED** to 100 PSI, **TREAD DEPTH** is 4/32 minimum for steering, Tire in **GOOD CONDITION**
- ✦ RIMS are not cracked or broken; no non-factory welds
- ✦ Lug nuts are tight, no apparent rust trails or shiny threads
- ✦ Hub oil cap and seal are not leaking and oil level is good
 - Contains oil for axel/wheel assembly lubrication

➤ **CLOSE HOOD NOW**

SIDE & REAR

Side Area (Right)

- ✦ Door & Mirror are properly mounted and secure; door operates properly
- ✦ DEF Tank, check for leaks and cap is tight and secure
- ✦ All lights & reflectors are in place, not broken and proper color
- ✦ Fuel tank, check for leaks and cap is tight and secure
- ✦ Mud flap, properly mounted and secure

Under Vehicle

- ✦ Drive Shaft is in place and secure
 - Transmits power from transmission to drive axel
- ✦ Exhaust System is properly mounted and secure
 - Piping to remove exhaust gases from the engine
- ✦ Frame is not broken, cracked, or bent
 - Structural member to support vehicle

Rear Suspension

- ✦ **Springs, Air Bags, & Shocks** are properly mounted and secure
 - Reduce wheel and road vibration to improve vehicle control
- ✦ **U-Bolts** are in place and secure



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Rear Brakes

- ✦ Brake hoses or lines are not frayed or broken
 - Carries air to wheel brake assembly
- ✦ Brake Chamber is properly mounted and secure; not broken
 - Converts air pressure to mechanical force to operate wheel brakes
- ✦ Slack Adjuster & Push Rod are properly mounted and secure
 - Provides means for proper brake adjustment
 - 1-inch free travel when released
- ✦ Drums and Linings are not cracked, broken, or missing
 - Linings are ¼ inch minimum thickness; they rub inside of drum to slow vehicle
 - IF DUST COVER IS IN PLACE, CANNOT OBSERVE THICKNESS OF LININGS PROPERLY

Rear Axle

- ✦ Tires are INFLATED to 100 psi, TREAD DEPTH is 2/32 (rear) or 4/32 (front) minimum, in GOOD CONDITION
- ✦ Rims are not cracked or broken; no non-factory welds
- ✦ Lug Nuts are tight; no apparent rust trails or shiny threads
- ✦ Axle Seal is not leaking and bolts are tight
 - Contains oil for axle /wheel assemble lubrication
- ✦ Spacers or budd wheel spacing is proper

Rear of Vehicle

- ✦ Door hinges are secure
- ✦ Warning lights, Clearance lights, Tail Lights, Brake Lights, Blinkers (L&R), Emergency Flashers and Reflective Tape are not broken. (**Will check later**)

Side Area (Left)

Same as RIGHT side of vehicle except for electrical box, battery box, a/c electrical box, and stop arms

- ✦ Stop Arms are properly mounted and secure. Say: **"I will check the stop arms during my lights test."**
- ✦ Electrical box runs on circuit breakers and we do not have to carry spare fuses
- ✦ Battery Box check for corrosion or broken wires. Checking for anything that should not be there
- ✦ A/C Electrical Box check the wires for good connection and for anything that should not be there



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Entering the Bus- Inside safety check

- ✦ Steps not broken or blocked
- ✦ Handrails are properly mounted and secured
- ✦ Student Mirror is properly mounted and secure; not broken
- ✦ Body Fluid Kit
- ✦ First Aid Kit
- ✦ Fire Extinguisher has been serviced and charged. Service Date: _____
- ✦ 3 Reflective triangles
- ✦ Driver Seat Belt does not have any frays. It is properly mounted and secure
- Continue to do the inside safety check
- Say: **“I will show that my switches and gauges work after I complete my inside safety check.”**
- **TURN KEY TO ACCESSORY**
 - ✦ Seating is properly mounted and secure (**MUST** shake each seat at bottom)
 - ✦ Rear door- open to make sure buzzer sounds
 - ✦ Seating is properly mounted and secure (**MUST** pull on back of seats as you walk to front of the bus)
 - ✦ Emergency Exit- 2 **ROOF** Emergency Exits and 4 **WINDOW** emergency exits (**MUST OPEN 1**)

SAFE START

Say: **“I AM GOING TO CONDUCT A SAFE START.”**

- ✦ **PUT SEATBELT ON**
 1. Turn bus on
 2. Wait for all lights to go out
 3. Start bus
 4. Turn on headlights (Always drive with them on)
- ✦ Temperature Gauge is operating properly; cannot go over 210 degrees
 - Measures water temperature in engine cooling system
- ✦ Oil Pressure Gauge is operating properly; 20 degrees start up, 50-60 highway
 - Indicates that engine oil pressure is adequate
- ✦ Voltmeter is operating properly. Charging reads 12-15 volts
 - Indicates that the alternator is working properly
- ✦ Lighting Indicators are working properly
 1. Activate Master Switch and open door (red lights will activate)
 2. Left & Right turn signal
 3. 4-way Flashers
 4. High & Low Beams
- ✦ Tester will walk to rear of vehicle:
 5. Activate Master Switch and open door (red lights will activate)



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6. Left & Right Turn Signal
 7. 4-way Flashers
 8. Apply Brake
 9. Put vehicle in Reverse
- Recycle Bus- turn loading lights off! Walk to rear of bus and PUSH CHILD LOCK, return to seat. Once tester is back on the bus, Restart the Bus
 - ✦ Horn is operating properly
 - ✦ Heater and defroster are working properly
 - ✦ Noise Kill switch for Rail Road Crossing
 - ✦ Windshield is clean and has no damage
 - ✦ Mirrors are adjusted correctly for me
 - ✦ Wipers & Washers are operating properly
 - **Say: I will conduct an Air Brake Test** (without being told)



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Air Brake Test

(Must Verbalize highlighted areas)

1. Say: **“I’m going to place the wheel chocks”** with key in your hand
2. Return to Seat; put seatbelt on and start bus
3. Say: **“Running vehicle to achieve full air pressure of 120 psi.”**
4. Turn off bus and back to Accessory
5. Push in the parking brake applying even pressure
 - a. Push down on brake and hold for ONE (1) MINUTE; say **“Cannot lose more than three (3) psi in one (1) minute**
6. Fan brake (push up & Down quickly)
 - a. While fanning brakes say: **“Waiting for low air warning device to activate at approximately 60 psi.”**
7. Continue to fan brake waiting for park brake to engage at approximately 10-30 psi
8. After parking brake engages, turn on bus and say, **“Running bus to achieve full operating pressure of 120 psi.”**
9. Turn off bus, TAKE KEY OUT, and remove wheel chocks
10. Start engine and build air pressure to 120 psi

Parking Brake Test

- ✦ With parking brake set say **“Shifting bus to drive, accelerate to 1000 RPMs, the bus should not move.”**
- ✦ Say: **“Shifting bus to reverse, accelerate to 1000 RPMs, the bus should not move.”**

Service Brake Test

1. Release parking brake and say: **“Shifting bus to drive and move forward (3-5 mph) and apply brakes; the steering wheel should not pull to the left or right.”**