BETTER TRUCKING TO

General prompts

- How can we help you today?
- Did any lights like the "check engine" light on the dash?
- Under what conditions do the symptoms show? Is the problem constant or intermittent?
- How long has there been a problem?
- Did the problem start shortly after repairs or maintenance was done to the vehicle?
- Is this the first time the vehicle has had this problem?

Symptom based questions:

Engine won't start

- Does the engine turn over (crank)?
- Has the problem gotten progressively worse, or is this a new problem?
- Has any work been done on the engine, the batteries or the charging system lately?
- Could extreme hot or cold weather be a source of the problems?
- Is their fuel in the reservoirs?

Hard to start

- Did you see how many rpms the engine cranked while trying to start?
- Is the engine turning slower than usual?
- When was the last time the air and fuel filters were changed?
- 4. Is it hard to start after the engine has been off for a long period of time? How long?
- While cranking the engine, do you see smoke coming from the exhaust?

Engine Shuts Down

- Are there any warning lamps in the dash like check engine, or another system?
- Did all electric components lose power at the same time?
- After the shut-down, did the dash sweep?
- Is this a new problem for the vehicle?
- Was work done on the batteries, charging or starting system?
- When the engine shut down, was there an even like an impact on the road, or under heavy hauling?
- Were there any unusual noises when the shut-down occurred?

Engine runs rough

- Is this a new problem, or has it become progressively worse?
- Has there been any recent engine repairs or maintenance?
- Are there particular times the problem happens like low or high idle, under heavy or low loads, while stopped or going uphill?
- Are there any lights on the dash like check engine or aftertreatment?

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• Are the engine brakes working properly?

Engine Misfire

- Is the engine misfiring or rough?
- Have there been any engine repairs or maintenance done recently?
- Has there been any recent engine repairs or maintenance?
- Are misfires consistent in any way or sporadic?
- If the misfires are intermittent or sporadic, is it still misfiring now?

Truck has a vibration

- Do you have an idea what can be causing the vibration?
- Is there a related noise or do you feel the vibration?
- Is the vibration constant, during idle, cruising, in a certain gear, or under light or heavy load?
- Is the vibration related to low or high engine rpms?
- 5. Has any work been done to the drivetrain or suspension? Including transmission, clutch and driveshaft.

Unusual noises

- 1. Is the noise constant or intermittent? If intermittent, when does it make the noise?
- 2. Can you describe the noise? Do you have an idea where it is coming from?
- 3. Are there any other related or unrelated symptoms like vibrations or check engine lamps?
- 4. Is the problem new or progressively getting worse?
- 5. Does the noise get worse with speed or under load?

Leaks

- Can you tell which fluid is leaking?
- Was there a puddle on the ground?
- Do you know what area of the engine is leaking?
- Have you noticed excessive blowby out of the engine breather tube?
- Have any engine repairs or maintenance been done recently?

No or little cab heat

- Is this a new problem?
- Has the vehicle had any repairs recently?
- Is it a new problem or has it been getting progressively worse?
- Does it happen intermittently or consistently?
- Are you sure of the coolant level?
- What temperature does the engine get to?
- Do the HVAC dials and buttons seem to be working?

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Exhaust Smoke

- Is the problem new or progressively getting worse?
- Is the smoke white, grey, black or blue?
- Are fluid levels like engine oil and coolant okay or have you had to add?
- 4. Does the engine smoke only when cold? Only under load? Or any other specific time?
- When did the smoke begin?
- Are there any other symptoms, or any check engine lights?

Performance problems

Low power

If the problem has always existed:

- 1. How are you measuring/judging the low power? Versus what?
- 2. Is this vehicle built to similar spec as the vehicle you're comparing?
- What do you need the vehicle to do? Load/speed?
- 4. Are you carrying normal or heavier loads? On similar routes or with more hills?
- 5. Is there a history of this problem with this vehicle?

If the problem is new:

- Has there recently been any maintenance or repairs done to the vehicle?
- Are there other problems like vibrations or noises?
- 3. Are you carrying a normal or heavier load? On similar routes or with more hills?
- Has this new problem coincided with a recent refuel?

Poor fuel economy

If the problem has always existed:

- What fuel usage are you getting and how are you measuring it?
- Have you changed loads, routes or driving style?
- 3. What do you expect/need for fuel usage? Do you get it with other vehicles?

If the problem is new:

- How was mileage before, how is it now and how is it being measured?
- Is there a new driver involved?
- 3. Have nay components been replaced or adjusted on the vehicle lately? Is fuel selection possibly a problem?
- Has there been a change in load or route?
- Are there any other symptoms like noises, vibrations or check engine lamps?
- How old are the air and fuel filters?

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Universal end questions

Ask if the customer need anything else, on the vehicle or personally:

- Is there anything else for us to take a look at?
- Who needs to be advised of quotes or when the work is completed?
- Is there someone picking you up or do you need help to get back?
- Do you need a hotel or to get to a restaurant?
- Do you have any questions?

Notes for technician:	