

# SUSPENSION AND STEERING



## Tasksheet Manual for NATEF Proficiency

**CDX Automotive**



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# Resource Preview

**2008 NATEF and CDX tasksheet numbers** appear at the beginning and end of every task, as well as in the general information for the section.

**Required and recommended materials and equipment** are listed for each task.

**Safety issues** relevant to the tasks are listed at the beginning of every section.

### Power Steering Pump Maintenance and Service

Student/Intern information: \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

Vehicle make/model/year: \_\_\_\_\_ Year \_\_\_\_\_ Model \_\_\_\_\_

Odometer: \_\_\_\_\_

Learning Objective/Task	CDX Tasksheet Number	2008 NATEF Reference Number	2008 NATEF Priority Level
Determine proper power steering fluid type; inspect fluid level and condition.	C177	4B10	P-1
Flush, fill, and bleed power steering system.	C178	4B11	P-2
Remove, inspect, replace, and adjust power steering pump belt.	C180	4B13	P-1
Remove and reinstall power steering pump.	C181	4B14	P-2
Remove and reinstall press fit power steering pump pulley; check pulley and belt alignment.	C699	4B15	P-2
Inspect and replace power steering hoses and fittings.	C183	4B16	P-2
Diagnose power steering fluid leakage; determine necessary action.	C179	4B12	P-2

**Recommended Resource Materials**

- CDX Automotive program
- Technical service bulletins, shop manuals, and any other information applicable to the specific vehicle or components you are working on
- Class notes

**Materials Required**

- Vehicle or simulator, equipped with power steering
- Correct power steering fluid
- White piece of paper
- Power steering flush machine or drain pan
- Funnel
- Belt tension gauge
- Power steering pump pulley remover/installer tool
- Depending on the type of concern, special diagnostic tools may be required. See your supervisor/instructor for instructions to identify what tools may be required.

**Some Safety Issues to Consider**

- You will be working under the hood of a running vehicle. Keep your hands and fingers away from moving belts, fans, and other parts.
- When running any vehicles in the shop, make sure you use the shop's exhaust ventilation system to discharge all exhaust gas safely outside.
- Lifting equipment such as vehicle jacks and stands, vehicle hoists, and engine hoists are important tools that increase productivity and make the job easier. But they can also cause severe injury or death if used improperly. Make sure you follow the manufacturer's operation procedures. Also make sure you have your supervisor/instructor's permission to use any particular type of lifting equipment.
- Caution must be exercised when working around the power steering pump, especially if the vehicle has been driven recently or the engine is at operating temperature. The power steering fluid can be extremely hot and can burn if it comes in contact with unprotected skin. When operating the power steering system, it can be under high hydraulic pressure.

Time off: \_\_\_\_\_  
Time on: \_\_\_\_\_  
Total time: \_\_\_\_\_

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• Always wear the correct protective eyewear and clothing and use the appropriate safety equipment, as well as fender covers, seat protectors, and floor mat protectors.

• Make sure you understand and observe all legislative and personal safety procedures when carrying out practical assignments. If you are unsure of what these are, ask your supervisor/instructor.

**Performance Standard**

**0-No exposure:** No information or practice provided during the program; complete training required

**1-Exposure only:** General information provided with no practice time; close supervision needed; additional training required

**2-Limited practice:** Has practiced job during training program; additional training required to develop skill

**3-Moderately skilled:** Has performed job independently during training program; limited additional training may be required

**4-Skilled:** Can perform job independently with no additional training

**TASK** Determine proper power steering fluid type; inspect fluid level C177 4B10

- Research specified power steering fluid for this vehicle using the appropriate service manual.
  - Specified fluid.
  - When should the fluid be checked? **Hot/Cold/Either** (Circle one)
  - If the service manual lists a procedure for flushing the power steering fluid, list the main steps (you can paraphrase, or print off the procedure):
- Follow the manufacturer's procedure to check the fluid level.
- Locate the power steering fluid reservoir.
  - List the level of the power steering fluid: \_\_\_\_\_

**NOTE** If power steering fluid is below the minimum level, it could mean there is a leak in the system. Investigate this possibility and report it to your supervisor/instructor.

- Place a small amount of the fluid from the reservoir on a white piece of paper and describe its condition:
- Determine any necessary action/s:
- Have your supervisor/instructor verify satisfactory completion of this procedure, any observations found, and any necessary action/s recommended.

Performance Rating

CDX Tasksheet Number: C177    2008 NATEF Reference Number: 4B10

Supervisor/instructor signature \_\_\_\_\_ Date \_\_\_\_\_

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**Time card** feature appears at the beginning of every task and allows students to track the time they spend on each task.

**Note boxes** offer students vital information to consider while performing the task.

**Performance standard and rating areas** simplify the sign-off process for instructors.

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# CDX Automotive

Designed to help automotive programs meet NATEF requirements, this interactive automotive training system introduces students to the fundamental principles and applications of automotive education. It also equips instructors with a complete set of easy-to-use course materials. This innovative resource will enrich your conventional course, or can be used as a primary management source to deliver an online program that accommodates increasing student enrollments.

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- Course content mapped to the 8 ASE test areas
- Easy and intuitive navigation
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- Unlimited practice tests, knowledge check exercises, and final exams that are automatically scored and recorded to save time and eliminate human error
- Support for both 2005 and 2008 NATEF standards with tasksheets and updated tasksheet reporting, making ASE recertification even easier for instructors nationwide
- *CDX Automotive Access Pack* option for students looking to purchase required or recommended access to **CDX Automotive** from their local college bookstore

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