

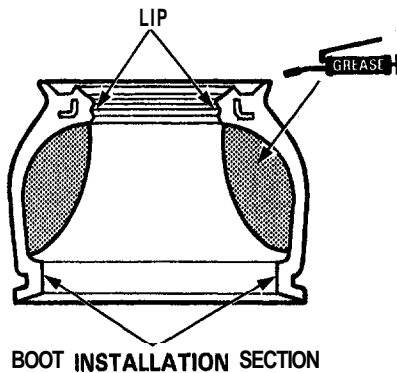
Manual Steering

-Ball Joint Boot Replacement

1. Remove the circlip and the boot.

CAUTION: Do not contaminate the boot installation section with grease.

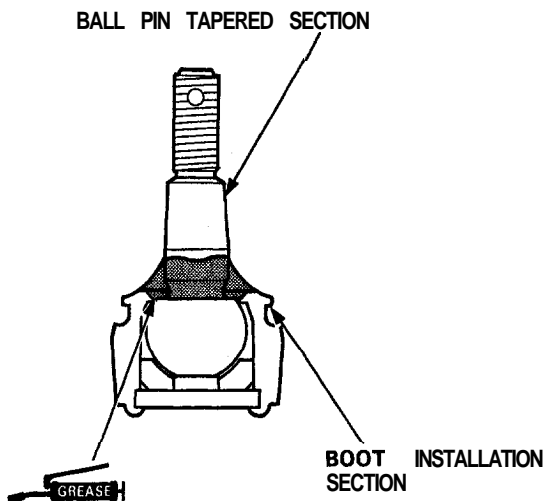
2. Pack the interior of the boot and lip with grease.



3. Wipe the grease off the sliding surface of the ball pin, then pack the lower area with fresh grease.

CAUTION:

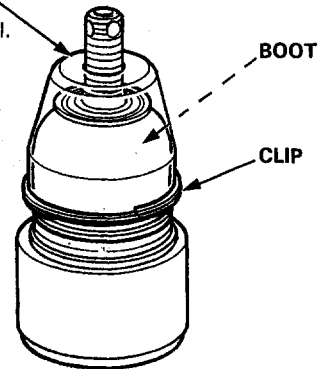
- Keep grease off the boot installation section and the tapered section of the ball pin.
- Do not allow dust, dirt, or other foreign materials to enter the boot.



4. Install the boot in the groove of the boot installation section securely, then bleed air.

5. Insert the special tool into the threads in the ball pin and align the end of the tool with the groove in the boot. Slide the clip over the tool and into position.

BALL JOINT
BOOT CLIP
GUIDE
07MAG-SL00100
Adjust the depth
by turning the tool.



CAUTION: After installing the boot, check the ball pin tapered section for grease contamination and wipe it if necessary.



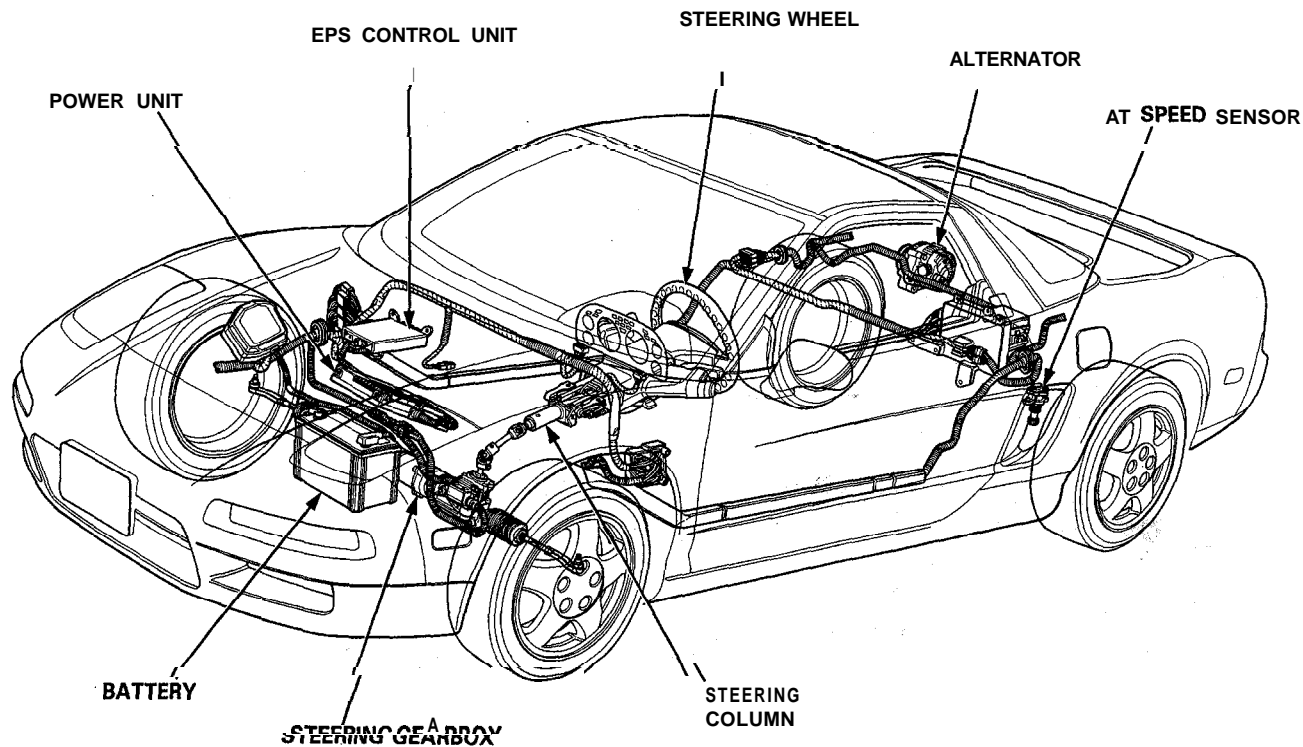
System Description

Electrical Power Steering (EPS)

Outline

The NSX uses an electric motor-driven power steering, which possesses the characteristics best suited for a mid engine automobile. This system is a power-assisted steering device, with a motor inside the steering gearbox driven by the control unit and power unit. Its distinctive features are described below:

- Minimized loss of engine horsepower are decreased, fuel consumption.
- A linear steering feel and the reduction of kick back.
- Since it requires no complicated hydraulic piping, etc., the system is compact and light in weight.

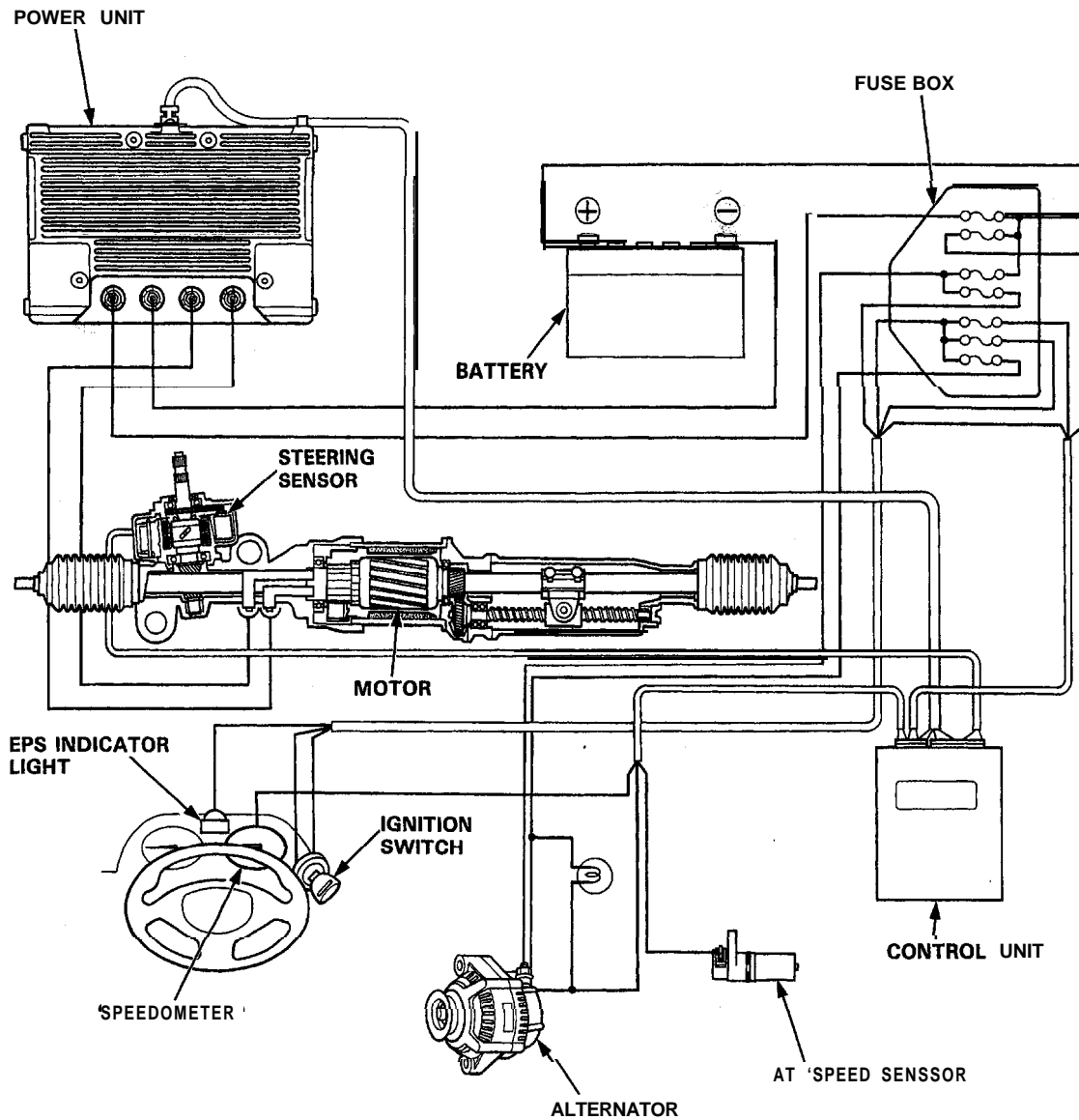


System Description

-Major Components

The Electrical Power Steering system is composed of the following major components:

- A steering gearbox that converts rotary operation of the steering wheel into transverse operation via a rack and pinion mechanism. Steering sensors and an actuating motor are incorporated.
- A control unit that computes the optimum amount of power assistance, taking into account steering torque, steering speed, and vehicle speed. Selfdiagnosis functions are included.
- A power unit that drives the motor according to the signals from the control unit. A current sensor is built in to give feedback information to the control unit. Two relays shut off the power if a problem in the system occurs.
- Two speed sensors, the speedometer and the automatic transmission sensor, send vehicle speed information to the control unit. Two sensors are used as a double-check.





-System Operation

Manual Steering Operation

Steering wheel input rotates the pinion of the gearbox through the universal joint. Due to the rack and pinion mechanism, the rotation of pinion is converted into a transverse motion at the rack, which steers the front wheels through the tie-rods and knuckles the same as an ordinary rack and pinion system.

Assisting Operation

In addition to the manual steering operation, the steering sensor on the pinion shaft transmits a signal to the control unit when it receives a steering input. The control unit calculates an adequate motor control with addition of speed signals the two speed sensors, then transmits a control signal to the power unit. Based on the signal from the control unit, the power unit drives the motor inside the gearbox. The torque generated by the motor is transmitted to ball screw through gears and converted into an assisting thrust in the axial direction of rack. The assisting thrust acts in the steering direction and lessens the steering force required at the steering wheel.

