

STEER.

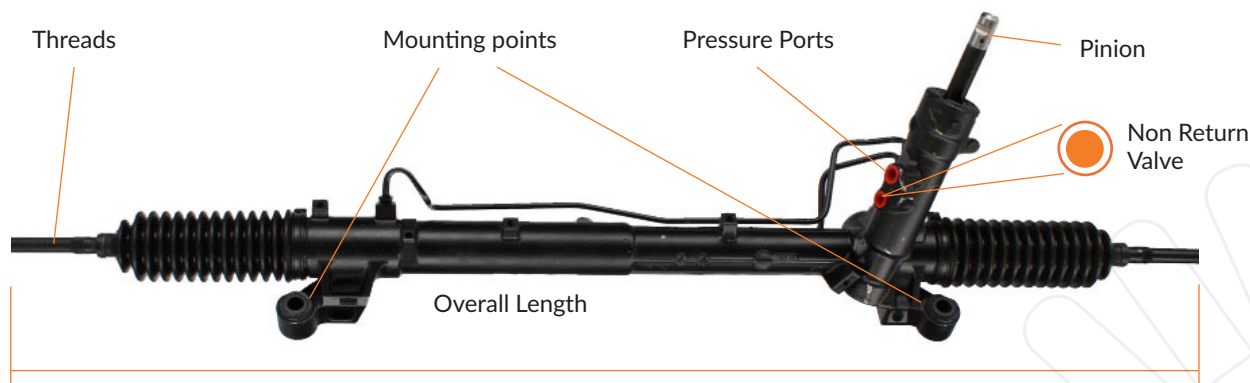
POWER STEERING RACK FITTING INSTRUCTIONS

The following instructions represent a general guide for the replacement of most power steering racks. For specific instructions please refer to the vehicle manufacturer's manual.

The fitting of steering racks must be carried out by a qualified mechanic, equipped with the correct tools and safety equipment.

1. Checklist

- Check the diagnosis. Could it be the pump, ball joints, steering column/coupling, low tyre pressure or the electric motor (electric assist type only) causing the problem?
- Check the unit supplied. Is it a suitable replacement? Check the overall length, mountings, pinion, ports and threads. Your warranty will be void if the incorrect unit is fitted or the unit is not fitted correctly.
- Replace the power steering fluid filter. (where applicable)
- Check power steering hoses, remembering that they wear from the inside out. (it is recommended that hoses are replaced after 5 years)
- Check steering coupling and column for wear or stiffness.
- Flush the power steering system thoroughly. (See below for full instructions)



2. Important

TRANSFER NON-RET URN VALVE FROM IN-LET PORT.

If the old steering rack is fitted with a non-return valve in the in-let port, this must be located as the feed pipe being removed. It can then be cleaned and fitted to the replacement steering rack. Failure to re-fit this will cause the upper pinion seal to fail and this will invalidate your warranty.

Do not use undue force when locating the steering coupling on the pinion. The pinion of this unit is very delicate and will not withstand heavy impact. It is recommended, where possible, that the coupling be fitted to the pinion before the rack is installed. It is important during fitting to protect the steering rack boots from damage. The use of hammer, screwdriver or similar tool is not recommended. Any puncture of the steering rack boots will lead to premature failure of the unit and will invalidate your warranty.



STEER.

POWER STEERING RACK FITTING INSTRUCTIONS (cont'd)

3. Flushing the system

(refer to Technical Bulletin **STEC.10003 - POWER STEERING SYSTEM FLUSHING**)

It is important to flush the system after a new component has been fitted as debris from hoses and the pump can cause the rack to fail. The use of WYNN'S POWERSERVE - FLUSH and FILL machine is recommended.

Hose residue in the system

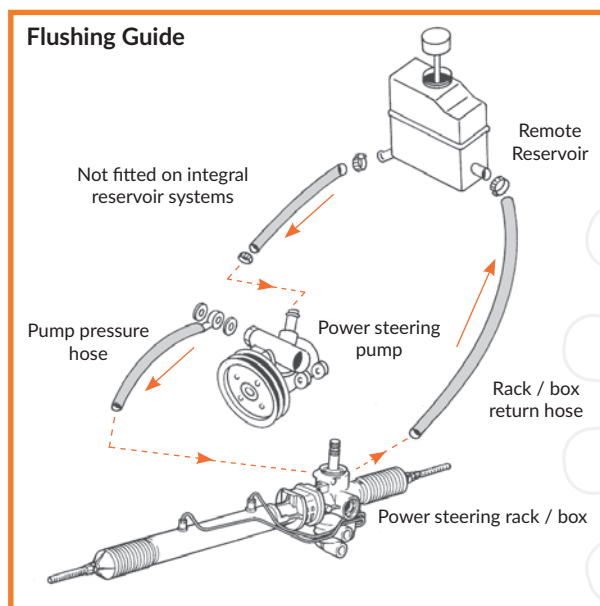
Power steering hoses deteriorate from the inside out. Rubber debris may block ports and valves causing the steering to malfunction. If there is any doubt over the hoses, it is recommended they are replaced.

Metal debris in the system

Metal debris in the system can cause the steering seals to blow almost immediately after installation. If metal debris is found in the fluid whilst flushing it is recommended that the pump and hoses are replaced.

CONTAMINATED FLUID WILL INVALIDATE YOUR WARRANTY.

- The assistance of another person and a sufficient quantity of the recommended power steering fluid for the vehicle being serviced are essential.
- If the system has a remote reservoir or it is possible to detach the integral reservoir, it is recommended that it is removed and manually cleaned as this will contain the main build-up of debris.
- After the old rack has been removed, and before the replacement is fitted, take the pump pressure hose and hold this in a suitable container to collect the fluid. Fill the pump reservoir with fresh fluid, ensuring the reservoir does not drop below its minimum level. If the reservoir runs dry, the pump will be damaged.
- Start the engine and continue filling the reservoir until the fluid being discharged appears to be clean. To ensure this part of the system is clean, the discharge should be filtered. If there is still debris found, flushing must continue until it is all removed.
- If metal splinters are found in the waste fluid, this indicates that the pump is worn and is breaking down. It must be replaced.



STEER.

POWER STEERING RACK FITTING INSTRUCTIONS (cont'd)

- f. Fit the steering rack and connect the lines. (Refer to the manufacturer's specifications for the correct torque required. Over tightening will result in damage to the housing and threads and this will invalidate your warranty.)
- g. Disconnect the return hose at the reservoir and follow the above procedure again. This final flush will remove the test fluid and any debris from fitting. Close the system by reconnecting the return hose.
- h. Finally, the system needs to be bled of air. Lift the car so the wheels are free (no weight on them) with the reservoir open and full. Start the engine. Run the steering fully from left to right and back again, keeping the reservoir topped up. Repeat this until no air bubbles are visible in the fluid.
- i. Some types of vehicle are more difficult to bleed than others. This can cause the power assistance to be intermittent and/or noisy. Make sure all fittings are airtight by loosening slightly and retightening (do not over-tighten). In extreme cases, it may be necessary to use a vacuum pump to bleed the system.
- j. After wheel realignment (tracking) the vehicle, please ensure the rubber boots are in the correct position. Misaligned boots will cause the rack to fail prematurely.

4. Core policy (old unit return)

Old unit must be returned in the replacement unit box.

Old units are only accepted on a like for like basis i.e. part number returned must be the same as the part number supplied. All units must be returned undamaged and complete.

Credit will not be given against old units with the following defects.

- a. Damaged or missing parts, pinion, pipes, ports, threads and tie rods etc.
- b. Excessive rust, seized or bent rack bar or casing.
- c. Broken casing or broken bolts left in casing.
- d. Incomplete assembly.
- e. Scrap yard burn-off.
- f. Left-hand drive assembly.

