

Service Information

Mazda Motor Corporation

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Category R	Technical	Ref. No. E004/03	Page 1 of 3
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued May 15, 2003	
Please convey this information to your <input type="checkbox"/> Director <input checked="" type="checkbox"/> General Manager <input checked="" type="checkbox"/> Warranty Dept. <input checked="" type="checkbox"/> Parts Dept. <input checked="" type="checkbox"/> Training Dept. <input checked="" type="checkbox"/> Field Rep.		Date Revised April 2, 2009	
Applicable Model All models		Applicable Countries or Specifications Worldwide	

UPDATED

Subject: Caution for Shock Absorber Replacement

Update Note: This information supersedes the previous E004/03. Judgment Criteria has been revised.

DESCRIPTION

When you encounter a customer complaint on oil seepage or oil leakage from the shock absorber, please follow the instruction below to determine if the shock absorber should be replaced.

**If it is oil seepage, the shock absorber does NOT need to be replaced.
If it is oil leakage, the shock absorber needs to be replaced.**

Please be aware that warranty claims on oil seepage from the shock absorber will be denied under a condition like this.

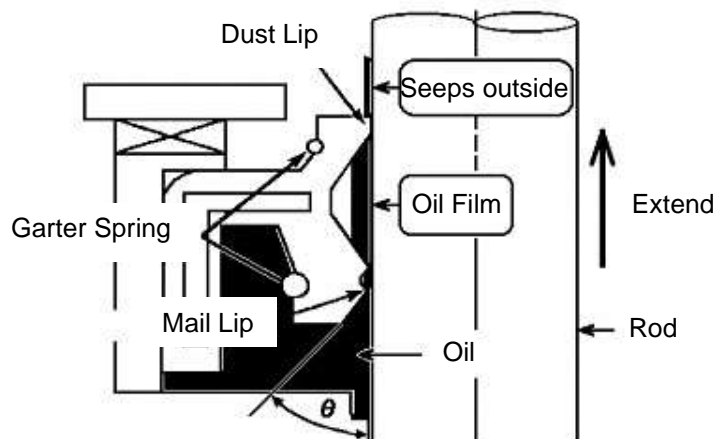
Cause of Oil Seepage

Oil seepage is caused by the following factors and not a problem.

1. The small amount of oil seeps outside through the dust lip at the normal operation.
2. The oil film thickness is uneven due to production variation of rod and seal.

When the rod receives input from the road then extends upward, most of the oil on the rod is scraped off by the main lip and some remains inside the dust lip.

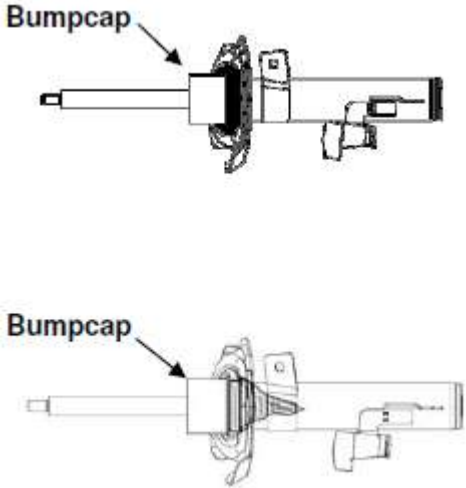
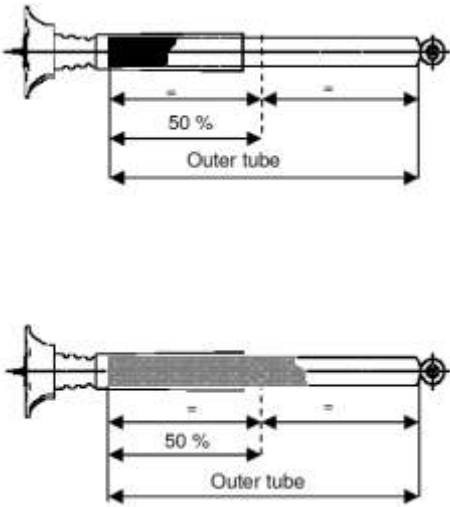
When the rod extends further, then most of the remaining oil on the rod is scraped off by the dust lip and small amount of oil seeps outside.

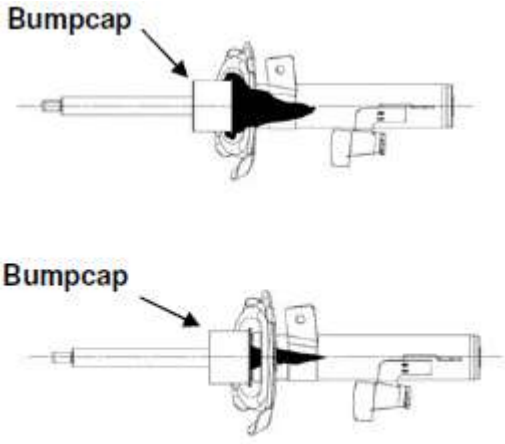
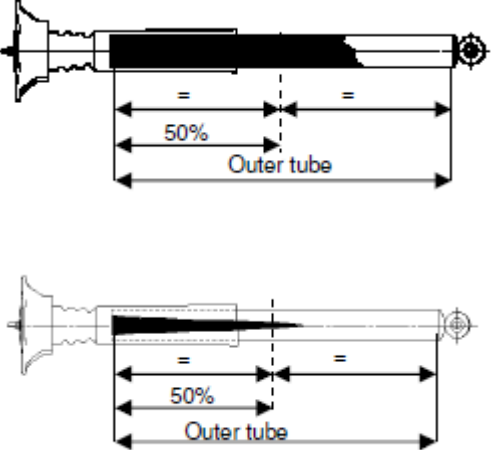


Cause of Oil Leakage

1. There is damage on the rod. (Dent, etching, rust or foreign substances)
2. There is damage on the lips. (More than 50 μm)
3. The seal becomes too old to function well.

Judgment Criteria for Oil Leakage or Seepage

Symptom	Description	Necessity of Shock Absorber Replacement
 <p>The top diagram shows a cross-section of a shock absorber with an arrow pointing to the bumpcap. Oil is shown dripping from the bumpcap area. The bottom diagram shows a similar cross-section, but the surface below the bumpcap is dry and sooty.</p>	<p>The oil seepage (0.25...0.50 CC) is only up to the spring seat and might be almost all around the outer tube and is not dripping / is not running down.</p> <p>Surface aspect is sooty (oil + dust). Damping / function is still performing well.</p> <p>Surface aspect is sooty (oil + dust) below spring seat and is neither dripping, nor running down and not wet with oil. The shock absorber is dry. Grey-black dry surface. Damping / function is still performing well.</p> <p>Dealer action: Clean and dry unit as much as possible after checking.</p>	
 <p>The top diagram shows a cross-section of a shock absorber with a shaded area on the upper part of the outer tube. A dimension line indicates that this area is less than 50% of the total outer tube length. The bottom diagram shows a similar cross-section, but the surface is dry and sooty.</p>	<p>Small amount of oil seepage (0.25...0.50) appears on the upper part of the outer damper tube and might almost be all around it. Small amount of oil seepage partly appears under the dust cover and may not pass half of the upper damper outer tube length (< 50 %)</p> <p>Surface aspect is sooty (oil + dust) and is neither dripping, nor running down and not wet with oil. The shock absorber is dry. Grey-black dry surface. Damping / function is still performing well.</p> <p>Dealer action: Clean and dry unit as much as possible after checking.</p>	<p>Not necessary</p>

 <p>Bumpcap</p> <p>Bumpcap</p>	<p>Oil seepage or even leakage, almost around the top of outer tube, will spread or run further downwards below the spring seat. Surface aspect is still sooty and even tube might be heavily wet with oil.</p> <p>The oil leakage is visible as a running down wet oil trace (s) passing the spring seat.</p> <p>Dealer action: Replace shock absorber.</p>	
 <p>50% Outer tube</p> <p>50% Outer tube</p>	<p>Oil seepage or even leakage, almost around the top of outer tube, will spread, leak or run further downwards further than 50 % of outer tube length. Surface aspect is still sooty and even tube might be heavily wet with oil.</p> <p>The oil leakage is visible as a running down oil trace (s) passing the 50 % of outer tube length.</p> <p>Dealer action: Replace shock absorber.</p>	<p>Necessary</p>

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