



Technical Service Bulletin

SUBJECT: INSPECTION CRITERIA FOR LEAKING SHOCK ABSORBERS			No: TSB-18-33-001
			DATE: April 2018
			MODEL: All Models
CIRCULATE TO:	☐ GENERAL MANAGER	☒ PARTS MANAGER	☒ TECHNICIAN
☒ SERVICE ADVISOR	☒ SERVICE MANAGER	☒ WARRANTY PROCESSOR	☐ SALES MANAGER

This bulletin supercedes TSB-10-33-001, issued January, 2010, to add more details of oil leakage severity. Revisions are italicized and indicated by ◀.

PURPOSE

This TSB provides instructions for shock absorber inspection, and criteria for determining oil leak severity to help dealers judge whether a shock absorber requires replacement.

AFFECTED VEHICLES

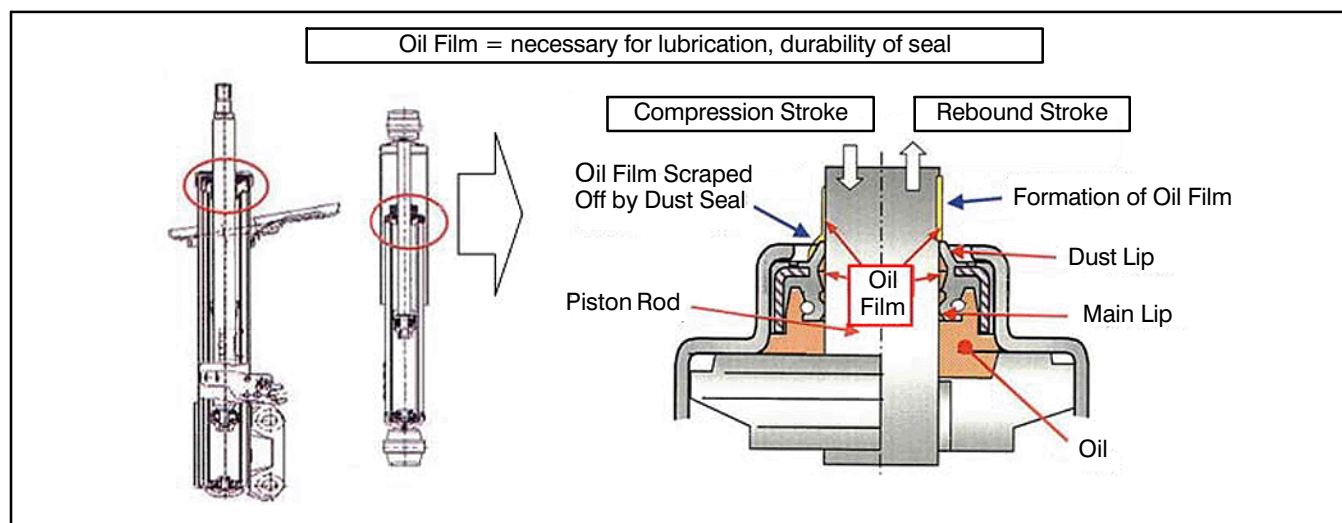
All models

DESCRIPTION

When inspecting shock absorbers, oil seen on the surface is not always an indication of a seal failure requiring shock replacement.

Shock absorber seals perform 3 functions:

1. seal the shock absorber oil inside the cylinder.
2. prevent dust from entering the cylinder.
3. spread an even film of oil to lubricate the piston rod and seal.



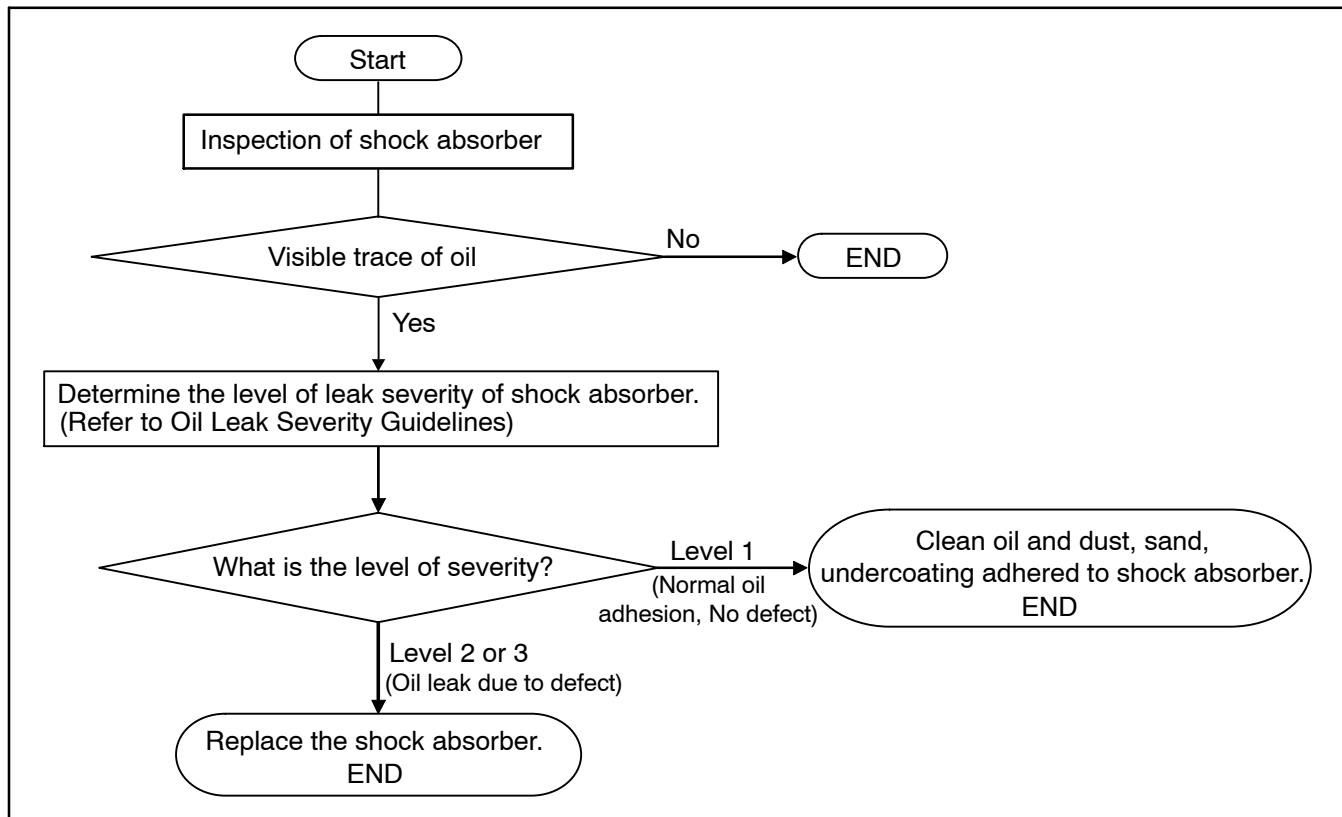
Shock absorbers lose a small amount of oil during use and this is considered normal. As the piston rod travels through compression and rebound strokes during shock absorber operation, a film of oil adheres to its surface, bypassing the seal. This helps lubricate and extend the life of the seal. During compression of the shock absorber, oil is scraped off the piston rod by the seal's dust lip and accumulates on the outer surface of the shock absorber. This small amount of oil does not always indicate a defective shock absorber.

PROCEDURE

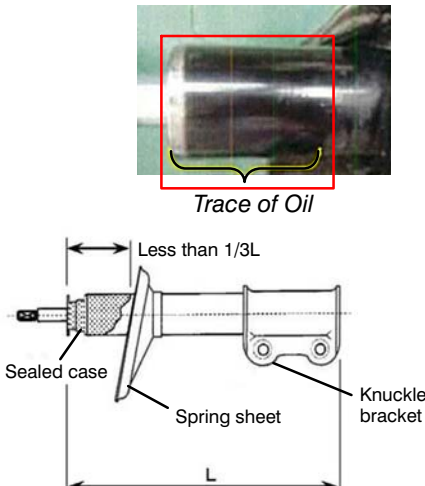
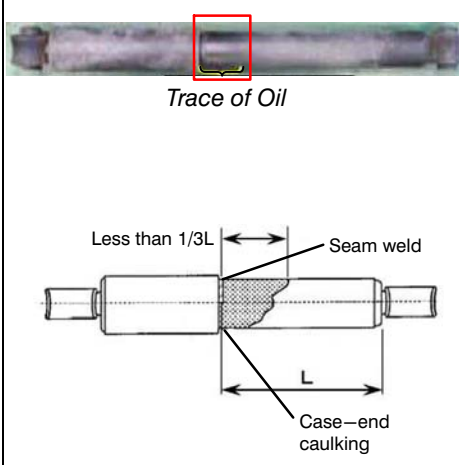
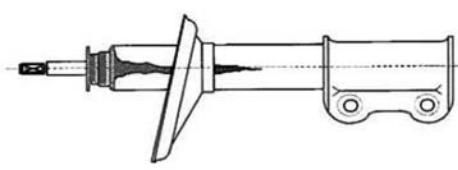
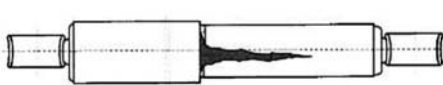
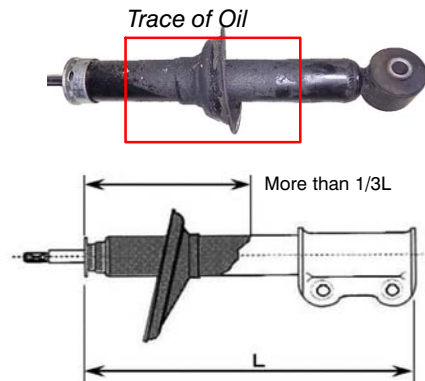
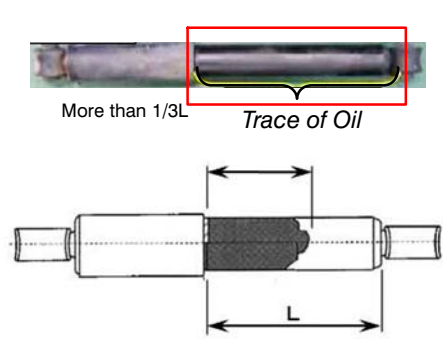
SHOCK ABSORBER VISUAL INSPECTION FLOWCHART

Use the Shock Absorber Visual Inspection Flowchart when inspecting shock absorbers. If there is oil visible on the shock's surface, use the Oil Leak Severity Guidelines to determine the extent of the leak, and proceed according to comments in the Remarks column.

SHOCK ABSORBER VISUAL INSPECTION FLOWCHART



OIL LEAK SEVERITY GUIDELINES

Level	Shock Absorber with Spring Seat (strut)	Shock Absorber without Spring Seat	Remarks
1	 Trace of Oil Less than 1/3L Sealed case Spring sheet Knuckle bracket L	 Trace of Oil Less than 1/3L Seam weld L Case—end caulking	Visible oil pattern is less than $\frac{1}{3}$ the length of the shock absorber body length (L). Appearance of oil in this pattern does not suggest a progressive oil leak. Replacement is NOT recommended and is NOT a warranty covered condition.
2			Band—like oil dripping (length is irrelevant). Appearance of oil in this pattern suggests a leak <i>in a short time span</i>. Replacement is recommended.
3	 Trace of Oil More than 1/3L L	 More than 1/3L Trace of Oil L	Visible oil pattern is more than $\frac{1}{3}$ the length of the shock absorber body length (L). Visible oil pattern at this level indicates the leak is progressing. Replacement is recommended.

WARRANTY INFORMATION

This TSB provides information only. When replacing shock absorbers, refer to the LOTS for repair operation numbers and labor times.

DO NOT replace shock absorbers categorized in level 1.

Shock absorbers categorized in level 2 or 3 should be replaced. **DO NOT** replace shock absorbers as an axle set (*right and left on same axle*) unless **BOTH** show level 2 or 3 leakage. Replace leaking shock absorbers only.