

LOUVER & DAMPER MAINTENANCE

PERIODIC LOUVER & DAMPER INSPECTION AND MAINTENANCE

All adjustable louvers and automatic dampers should be checked and serviced on a regular schedule. Inspection intervals depend on system usage and atmospheric conditions within the system.

BASIC INSPECTION

- All louvers and dampers should be checked for freedom of movement. Shafts, bearings, pivot points, etc. should be cleaned and lubricated with a light spray oil. Any and all access should be removed.
- Blades should be checked in the closed position to insure tight closure. Adjustments should be made at linkage to correct any misalignment.
- Motors (electric or pneumatic) should be visually checked through their complete cycle for defects, binding or misalignment. Operator anchorage and fittings should also be checked.
- Blades should be checked for freedom of movement. Blades should be disconnected from their operators and manually checked (Blades should move freely with no binding or twisting).
- Pins, straps and bushings should be checked for wear, corrosion or rust. Replace or paint is required.
- Check louver or damper blade edge and jamb seals (where applicable).
- Check all linkage, connecting bars and operator connections for proper alignment and fit.
- Check overall installation to insure that louver or damper was installed in a perfectly plumb and square position and proper clearance was allowed for blade linkage and operator movement.

Note: Dampers with non-metallic or carbon sleeve bearings do not require lubrication



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Damper Maintenance - General

Dampers require proper maintenance. Blades and linkages and damper motor shafts should be periodically cleaned. Lightly lubricate with Moli-Spray Oil #3 applied to all brass fittings and any movable linkages, shafts or other moving parts. We find that this is the best lubricant for damper mechanisms. It is a molybdenum disulfide suspension in an extreme pressure oil carrier. It is furnished in aerosol cans with jet nozzles which permit pinpointing the stream of lubricant where required. It contains an evaporating solvent and dries to a non-oily film, which will therefore not attract dirt.

- NOTE:** 1. Never use regular lubricating oil on dampers as it will attract dirt and grit, creating additional problems.
2. Moli-Spray Oil #3 is also an excellent rust preventative for hand tools, etc.

If any time blade edge seals require replacing, old seals may be easily removed and new self-adhesive type seals applied. This may readily be done in the field. The metal surface must be thoroughly cleaned and all traces of dirt or oily film removed prior to applying new seals.

In order to get to some dampers, it may be necessary to cut an access door in the duct large enough to work through. It is obviously impossible to check or maintain dampers or controls that cannot be seen or reached. Unfortunately, however this condition exists in many buildings.

The multiple blade damper, while a simple control device, requires periodic attention to assure that it functions properly. Malfunction can lead to improper control of space temperatures and inadequate ventilation.

Most of the difficulties experienced on older damper installations may be traced to:

1. Misalignment of frame, blades, shafts or interconnecting linkage.
2. Racking or distortion of frames.
3. Insufficient drive motor power or pilot positioning pneumatic relay incorrectly set.
4. Inadequate sealing.



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5. Inadequate cleaning and lubrication.
6. Excessive wear or grooving of linkage pivots.
7. Longer daily running time.
8. Lack of periodic inspection and maintenance.

The newer, improved dampers now available provide:

1. Heavier duty frames assuring proper blade and shaft bearings alignment.
2. High-quality sintered bronze oil impregnated bearings; also lexan and Teflon bearings.
3. Heavy duty Link-ball damper linkage hardware.
4. Vinyl or rubber blade edge seals.
5. Vinyl or stainless steel spring strip blade side seals.

These features can be incorporated into existing damper installations. This is discussed in detail in the maintenance section of this manual – **Part III**

Periodic Damper Inspection and Maintenance

All automatic dampers should be checked and serviced on a regular schedule. Recommended interval is every 6 months. This period may be adjusted as required based on the age of the system and local atmospheric conditions. The following time schedules and check list (pg. 12) are suggested.

The operating staff should prepare and enforce adherence to this schedule of planned maintenance. For good results all operating parts of the control system must move in their proper relationship. It is important to lubricate the damper linkage and maintain it in proper adjustment.

Semi-Annually

1. All automatic dampers should be checked for freedom of movement and the Trunion bearings, shafts, etc. cleaned and lubricated with Moli-Spray Oil #3. Surplus film should be wiped off.



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2. Blades should be checked in closed position to be sure that they all close *tightly*. Adjustments should be made to the linkage in order to close any open blades.
3. Damper motors should be observed through an operating cycle to check for defects or binding. Damper motor anchorage should also be checked.

Damaged blades should be repaired or replaced. Dirt, soot, lint, etc. should not be permitted to accumulate on blades, as this will increase resistance, weight and present an unsightly appearance.

Caulking that was used to make damper frames tight to structure should be checked and repaired as needed.