**Maintenance Control Program**

Tri-State Elevator installs, services, and modernizes all types of elevators and other vertical transportation. Tri-State Elevator has served the Ohio, Kentucky and Indiana area since 2001 and specializes in the latest technology as well as ensuring safe and reliable operation of technologies past.

This Maintenance Control Program (MCP) is not a substitute for a complete maintenance program. This MCP is provided in accordance with applicable ASME A17.1 requirements and Ohio requirements and should not be considered all-inclusive.

This MCP does not create any contractual or business relationship between TSE and the service provider. Tri-State Elevator does not make, and hereby disclaims, any guarantees or warranties regarding information in the document. This MCP is intended for the limited purposes set herein. Any other use, disclosure, or reproduction is strictly prohibited.

This MCP was prepared in accordance with ASME A7.1b-2009 and earlier additions as well as the laws and rules of the authority having jurisdiction.

**Warning**

This MCP is intended for use, and restricted to use, by Tri-State Elevator ONLY as defined by ASME A17.1. Tri-State Elevator shall not be responsible for any personal injury or damage to personal property or consequential damages or injuries due to the improper use of this manual. This manual is intended solely for the use of Tri-State Elevator personnel.

**Maintenance Control Program**

**Table of Contents**

**Section 1** Availability

**Section 2** Maintenance General Maintenance

 Required Maintenance

**Section 3** Examination/Inspections/Testing

**Section 4** Special Provisions

**Section 5** Service Records

**Section 6** Procedures for Repair or Replacement

**Section 7** Product Specific Information

**Section 1 Availability**

This MCP is made available to ONLY elevator personnel authorized to service, maintain, or otherwise work on the equipment for which this program is designed. This MCP can be viewed at the website for TSE- tristate-elevator.com.

Any unauthorized use of this manual is strictly prohibited. Any unauthorized reproduction of this manual is strictly prohibited. Visit tristate-elevator.com to review a copy of this manual for the purpose of which it is intended only.

A generic copy of this manual may be provided to the elevator owner or stored on the elevator location property or in the elevator equipment room at the sole discretion of TSE. This generic copy is not all inclusive of information and is not intended to meet the requirements for an MCP as set forth in ASME A17.1, but to provide a general knowledge of TSE and the elevator equipment under care. Unauthorized reproduction of this generic manual is strictly prohibited.

**Section 2 Maintenance**

**General Maintenance**

Hoistways, Pits, and Machine Rooms/Spaces or Control Room/Spaces

* + Hoistways and pits shall be kept clean and dry
	+ Hoistways, pits, and machine rooms/spaces shall not be used for storage
	+ All floors shall be kept clean and free from oil or grease
	+ Flammable liquids having a flashpoint of less than 111 degrees (44 degrees Celsius) shall not be stored in machine rooms/spaces.
	+ All access doors shall be kept closed and locked to prevent unauthorized entry

Tops of Cars

* + The tops of cars shall be kept free from debris, oil and grease
	+ No lubricants or tools may be stored on the tops of cars

Use of Jumpers 8.6.1.6.3

* + All jumpers shall be removed prior to returning the elevator to service
	+ Jumpers shall not be stored in the machine room/spaces or control room/spaces

Safety Related Devices 8.6.1.6.1

* + Safety related devices and electrical protective devices shall be made inoperable ONLY for testing, inspections, and maintenance where required.
	+ The public shall NOT be permitted use of the unit during such tests
	+ The unit shall be restored to its normal operating condition before being returned to public use

Lubrication 8.6.1.6.2

* + All parts of the machinery and equipment requiring lubrication shall be maintained with lubricants of a grade and quality recommended by the manufacturer
	+ All excess lubricant shall be cleaned from the equipment
	+ Containers used to catch leakage shall not be allowed to overflow

**Required Maintenance**

Pursuant to Ohio Statutes 399, all elevators must have maintenance performed at least once per year. The required maintenance shall be done in accordance with ASME 17.1b-2009, 8.6. Records of maintenance shall be kept and made available to authorized personnel. TSE maintenance records are kept in a central location.

Gland Packings and Seals 8.6.5.5

* Where valves and cylinders use packing glands or seals, they shall be examined and maintained to prevent excessive loss of fluid
* Oil leakage collected from each cylinder head seals or packing gland shall not exceed 5 gallons (19L) before removal
* Container shall not be allowed to overflow

Flexible Hoses and Fittings 8.6.5.6

* Installed between tank and cylinder without an overspeed valve
1. Shall be replaced not more than 6 years after installation date
* Hose assemblies that do not indicate installation/replacement date shall be replaced

Record of Oil Usage 8.6.5.7

For Systems with unexposed portions of cylinders

* A written record shall be kept of the quantity of hydraulic fluid added to the system and emptied from leakage collection containers
* The written record shall be kept in the machine room/space
* When the quantity of fluid loss cannot be accounted for, the test specified in 8.6.5.14.1 and 8.6.5.14.2 shall be performed

Relief-Valve Setting 8.6.5.9

* The relief-valve assembly shall be examined to ensure that the seal is intact
* If the seal is not intact, checks shall be conducted in accordance with 8.11.3.2.1

Runby and Clearances 8.6.5.10

(Roped Hydraulic Units Only)

* When suspension ropes are replaced or shortened all required clearances and runbys shall be maintained

Cylinder Corrosion Protection and Monitoring 8.6.5.11

* Where monitoring is provided it must be maintained
* If the monitoring means detects that a loss of corrosion protections has occurred, the means of corrosion protection shall be replaced

Anticreep and Low Oil Protection 8.6.5.12

* The anticreep function and low oil protection shall be maintained to operate in compliance with the applicable code

Overspeed Valve Setting 8.6.5.13

* Overspeed valves shall have the adjustment means examined to ensure the seal is intact
* If seal is not intact, compliance with 8.11.3.4.5 shall be verified and a new seal shall be installed

**Section 3 Examination/Inspections/Testing**

Per ASME A17.1b-2009 and in accordance with ASME A17.2-2010

*See Appendix A*

**8.6.5.14 Periodic Test Requirements- Category 1**

8.6.5.14.1 Relief Valve Settings and System Pressure (Item 2.31)

8.6.5.14.2 Cylinders and Pressure Piping (Item 2.36.2)

8.6.5.14.3 Additional Tests

 Normal and Final Terminal Stopping Devices (Item 2.28)

 Governors (Item 2.13)

 Safeties

 Oil Buffers (Items 3.29 and 5.8)

 Firefighters’ Emergency Operation (Items 6.3 and 6.4)

 Standby or Emergency Power Operation (Item 1.17)

 Power Operation of Door System (Item 4.6 and 4.7)

 Emergency Terminal Speed-Limiting Device and Emergency Terminal Stopping

 Device (Item 3.6)

 Low Oil Protection Operation (Item 2.23.2)

8.6.5.14.4 Flexible Hose and Fitting Assemblies

8.6.5.14.5 Pressure Switch (Item 2.37)

**8.6.5.15 Periodic Test Requirements- Category 3**

8.6.5.15.1 Unexposed Portion of Pistons (Item 5.11)

8.6.5.15.2 Pressure Vessels (Item 2.33)

**8.6.5.16 Periodic Test Requirements- Category 5**

8.6.5.16.1 Governors, Safeties and Oil Buffers

8.6.5.16.2 Coated Ropes (magnetic flux test)

8.6.5.16.3 Wire Rope Fastenings (Item 3.23)

8.6.5.16.4 Plunger Gripper

8.6.5.16.5 Overspeed Valves

8.6.5.16.6 Freight Elevators (with Class C2 loading)

**Section 4 Special Provisions**

Per ASME A17.1b-2009

8.6.11.1 Firefighters Emergency Operation

 See Appendix B

8.6.11.2 Two-Way Communication Means

8.6.11.3 Access Keys

8.6.11.4 Cleaning of a Car or Hoistway Transparent Enclosure

 See Appendix C

8.6.11.5 Emergency Evacuation Procedures for Elevators

 See Appendix D

8.6.11.7 Operating Instructions for Means Specified (where provided- 2.7.5.1.1 and 2.7.5.2.1)

 See Appendix E

8.6.11.8 Egress and Reentry Procedures from Working Areas (where applicable- 2.7.5.1.3 and 2.7.3.2.3)

 See Appendix E

8.6.11.9 Operating Instruction for Working Platforms

 See Appendix E

**Section 5 Service Records**

All Tri-State Elevator Service Records are kept at a central location. See Appendix G for sample Service Chart. All service is performed to the requirements outlined in Section 2 of the MCP. Each chart is good for one (1) year and will be kept in the machine room during each calendar year. After each calendar year the record shall be replaced with a new chart and the old record stored at the central location.

**Section 6 Procedures for Repair and Replacement**

Elevators equipped with Fire Fighter’s Operation-

Elevators provided with GAL Manufacturing, Inc. door equipment-

Elevators provided with GAL Manufacturing, Inc., signal equipment-

Elevators provided with Adams Plunger Gripper-

**Section 7 Product Specific Instructions**