

**U.S.A. Access Cover & Frame Load Testing**

Exhaustive testing is the cornerstone of GMI product development – Outlined below is the proof-load testing procedure that GMI has adopted in order to certify that our composite utility access covers & frames perform in excess of street loading requirements.

**H-20 Loading Defined**

H-20 loading is a theoretical loading that is defined in the *American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges – 17th Edition*. The AASHTO standard defines H-20 as an axle load of 32,000 pounds; which translates to a wheel load of 16,000 pounds.

**AASHTO M 306-10**

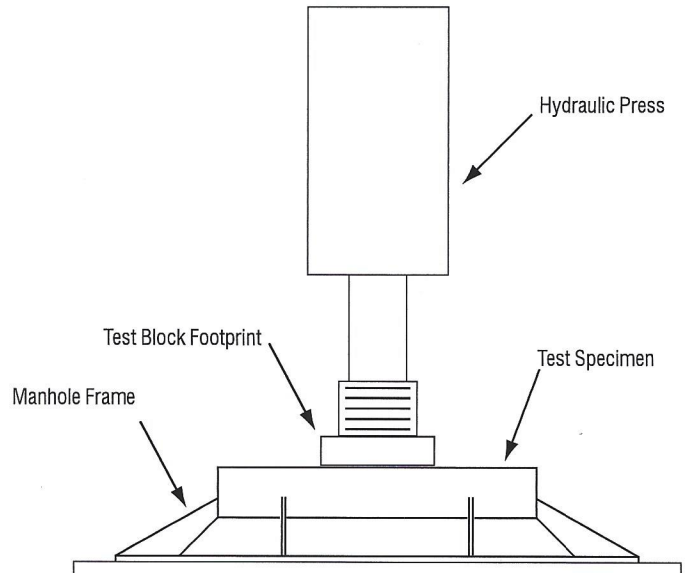
GMI composite manhole covers are proof load tested according to the procedure outlined by the *American Association of State Highway and Transportation Officials (AASHTO) Standard Specification for Drainage, Sewer, Utility, and Related Castings – M306-10*.

The following proof loads will be applied using a 9 in. by 9 in. steel test footprint.

AASHTO DESIGNATION	WHEEL LOAD	PROOF LOAD
H-20 and HS-20 Highway Traffic Service	16,000 lbs.	40,000 lbs.
H-25 and HS-25 Severe Traffic Service	20,000 lbs.	50,000 lbs.

\*\*Third Party Lab Test Certification letters can be furnished to user upon request.

**Test Apparatus**



**Test Procedure**

1. Test specimen is placed in the hydraulic test press and the 9 in. by 9 in. test footprint is centered on the specimen.
2. Pressure is applied to the specimen until the desired test load is achieved. The test load is then maintained for 60 seconds.
3. Upon removal of the load, the cover and frame shall be examined for cracks or detrimental permanent deformation. Permanent deformation shall not exceed 3.2mm.
4. Test specimen is then removed from the press and the back of the cover is examined for any detrimental deformation.
5. Test specimen is then placed back into test press and loaded to full destructive failure-destructive test loading available upon request.

Records of test results will be maintained by GMI Composites, Inc. for a period of seven years.

References, test results and case histories will be made available to the purchaser upon request.