

# Product Performance Summary

## 050-1900 8mm Single Rotary Latch

### Durability:

The 050-1900 8mm Single Rotary Latch will withstand a cycle life of 250,000 cycles a door seal load of 80 lbs (36 kg). This latch met a reliability/confidence level of R90/C75 in an ambient lab environment.

The 050-1900 8mm Single Rotary Latch will withstand a cycle life of 150,000 at a door seal load of 80 lbs (36 kg) while subjected to a dust environment, simulating conditions like that of an agricultural or construction environment.

### Door Seal Load:

Recommended DSL for this latch is 50 lbs (22kg), not to exceed 80 lbs (36 kg) to achieve maximum longevity.

(Door seal load may vary depending on application, which may impact the life of the latch)

### FMVSS 206 (Per SAE J839) Strength Performance:

Latch meets and exceeds load requirements of FMVSS 206 in transverse and longitudinal orientations, in both primary and secondary positions, when paired with approved TriMark Hoop Strike in accordance with SAE J839.

The FMVSS206 strength requirements are listed below.

Transverse Primary 9000N (2023 lbf) Secondary 4500 N (1112 lbf)

Longitudinal Primary 11000 N (2473 lbf) Secondary 4500 N (1112 lbf)

### Impact:

The 050-1900 8mm Single Rotary Latch was impact tested for rotor and latch integrity at an ambient lab temperature of 70° F (21° C).

The results showed no concerns of strength during impacting situations where the latch rotor is subject to a door slam event, simulating the rotor being closed and then struck by the striker. The mean impact energy achieved by the rotor was that equivalent to a 170 lb (77 kg) door being slammed at a rate of 5.58-6.56 ft/sec (1.7-2.0 m/sec).

### Functional Corrosion Test:

The 050-1900 8mm Single Rotary Latch remains operational and functions properly at the end of 144 hrs of salt spray testing per ASTM B117 neutral salt spray test methods.

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### **Recommended Mount Fastener:**

Mount fastener shall be M8 x 1.25, class 8.8 or better to comply with FMVSS 206 and EC-11 strength requirements.

The axles used in the 050-1900 8mm Single Rotary Latch are capable of withstanding a maximum recommended fastener torque however do not exceed 230 in lbf (26 N-m).

*(Latch must be used with a TriMark approved hoop strike - 070-1000 8mm Diameter Hoop Strike)*

**Note:** Additional testing information is available upon request.

The Product performance values shown are intended to be applied as a general guideline only, as specific applications and installation may affect the results. It is recommended that the Customer request a sample and conduct their own testing to determine the suitability of the Product for the intended purpose and specific application. Strength data is given as maximum loads at which the product is operable, however no safety factor has been applied.



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