



PREPARED FOR
DAIMLER TRUCK NORTH AMERICA

ENGINEERED FOR THE
**FIFTH GENERATION
CASCADIA**

AAI FL230BCQ

ALUMINUM QUICK RELEASE BUMPER

Front-end protection engineered around the G5's new safety-system packaging, lighting, airflow and service requirements.

UPFRONT ARMOUR FOR THE JOURNEY AHEAD.



PRODUCT OVERVIEW

AAI FL230BCQ - PURPOSE-BUILT FOR G5



APPLICATION

**G5 / Fifth Generation
Cascadia**

PART NUMBER

AAI FL230BCQ

CONSTRUCTION

Aluminum

SYSTEM

Quick Release

DESIGN INTENT

Deliver meaningful front-end protection while respecting the Fifth Generation Cascadia's more complex front architecture.

ENGINEERED AROUND THE TRUCK.

NOT ADAPTED FROM THE PREVIOUS MODEL.



G5 ENGINEERING

WHAT CHANGED AT THE FRONT OF THE TRUCK

ADVANCED SAFETY SYSTEMS

The G5 introduces expanded Detroit Assurance sensing and front-radar packaging. Guard and bumper geometry must preserve required sensing zones.

G5 DESIGN CONSTRAINT

NEW HEADLAMP GEOMETRY

The redesigned dual-stage LED headlamps and the headlamp-area clearance requirement changed the shape available for wrap-around protection.

G5 DESIGN CONSTRAINT

AIRFLOW & AERODYNAMICS

The Max Aero front package uses dedicated airflow paths around the bumper, grille and steer-tire area that must remain functional.

G5 DESIGN CONSTRAINT

HOOD & GRILLE PACKAGE

A reshaped hood and redesigned grille changed clearances, contours and the available envelope for the grille guard.

G5 DESIGN CONSTRAINT



ALI ARC ENGINEERING

PROTECTION THAT WORKS WITH THE G5



THE RESULT

G5-SPECIFIC GEOMETRY

The FL230BCQ was developed around the new truck's front-end package. These three views show how the grille guard follows the G5 headlamp and hood contours while preserving open areas for sensing, lighting and airflow.

CENTRAL RADAR

Open center architecture preserves the front-radar zone.

HEADLAMP AREA

Wrap-around tubes are shaped to maintain critical clearance.

LIGHT PATH

Framework is positioned to minimize obstruction of headlamp output.

AIRFLOW

Open grille and lower-bumper areas support the G5 airflow package.

SERVICE ACCESS

Quick Release supports practical front-end access.



SERVICEABILITY

QUICK RELEASE ACCESS



ACCESS MATTERS

DESIGNED FOR SERVICE.

The FL230BCQ Quick Release system is designed to simplify bumper movement when access to the front of the truck is required.

WHAT THIS VIEW SHOWS

With the bumper released, the front-end structure and central radar package remain accessible. This illustrates the packaging challenge Ali Arc had to accommodate while retaining a heavy-duty protection system.

QUICK RELEASE FRONT-END ACCESS

G5-SPECIFIC PACKAGING



ALI ARC INDUSTRIES

BUILT FOR NORTH AMERICAN TRUCKING



30+ YEARS OF ALUMINUM FRONT-END PROTECTION

Ali Arc Industries manufactures aluminum bumpers and grille guards in Winnipeg, Manitoba, Canada. The FL230BCQ applies that experience to the Fifth Generation Cascadia with a design focused on protection, compatibility and serviceability.

ALUMINUM SPECIALISTS

Focused expertise in aluminum truck protection.

NORTH AMERICAN MANUFACTURING

Manufactured in Winnipeg, Manitoba, Canada.

QUALITY MANAGEMENT

ISO 9001-certified manufacturing environment.

ALI ARC INDUSTRIES LP

155 Elan Blvd. | Winnipeg, MB R2J 4H1 | Canada

204-253-6080 | 1-877-725-4272 | sales@aliarc.com | aliarc.com