

DOCUMENT AF145-008

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

**AFM-SM117-1 STEP MOUNT
FOR THE
EUROCOPTER BK117/EC145 ROTORCRAFT**



**AIRFILM CAMERA SYSTEMS
6245 AERODROME WAY
HANGAR NO. 2
GEORGETOWN, CA**

**AIRFILM CAMERA SYSTEMS
MAINTENANCE INSTRUCTIONS
DOCUMENT No. AF145-008**

RECORD OF REVISION

When updated, this document is revised in its entirety.

No.	Date	By	DESCRIPTION
N/C	01/07/2008	JCF	Original release
A	07/25/2016	JM	Added D-2 model; removed List of Effective Pages Table; Added revision note to record of revision; Added List of Tables; Updated section, table, and figure numbers

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1.0 GENERAL

1.1 INTRODUCTION

This manual presents the Maintenance Instructions for the installation of the Airfilm Camera Systems model AFM-SM117-1 Step Utility Mount. This mount is to be installed on either side of the Airbus Helicopters landing gear Airbus Helicopters MBB-BK117 C-2 and D-2 model rotorcraft. The mount is designed to facilitate the attachment of equipment such as video cameras and infrared sensors. The cover page of this document shows the typical mount installation.

1.2 PURPOSE

The purpose of this document is to provide Maintenance Instructions to inspect the Airfilm Camera Systems Model AFM-SM117-1 STEP Mount.

1.3 SCOPE

The scope of this document is limited to information, procedures, requirements and limitations for this Supplemental Type Certificate. When a requirement specified in the appendix to the regulations is not applicable to this Supplemental Type Certificate the requirement will not be included in the Maintenance Instructions.

1.4 APPLICABILITY

These Maintenance Instructions are applicable to the Airfilm Camera Systems AFM-SM117-1 STEP Mount installed on Airbus Helicopters MBB-BK117 C-2 and D-2 model rotorcraft.

1.5 SPECIAL TOOLS

No special tools are required for maintenance of this appliance

2.0 AIRWORTHINESS LIMITATIONS

NONE AFFECTED

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3.0 INSPECTION REQUIREMENTS

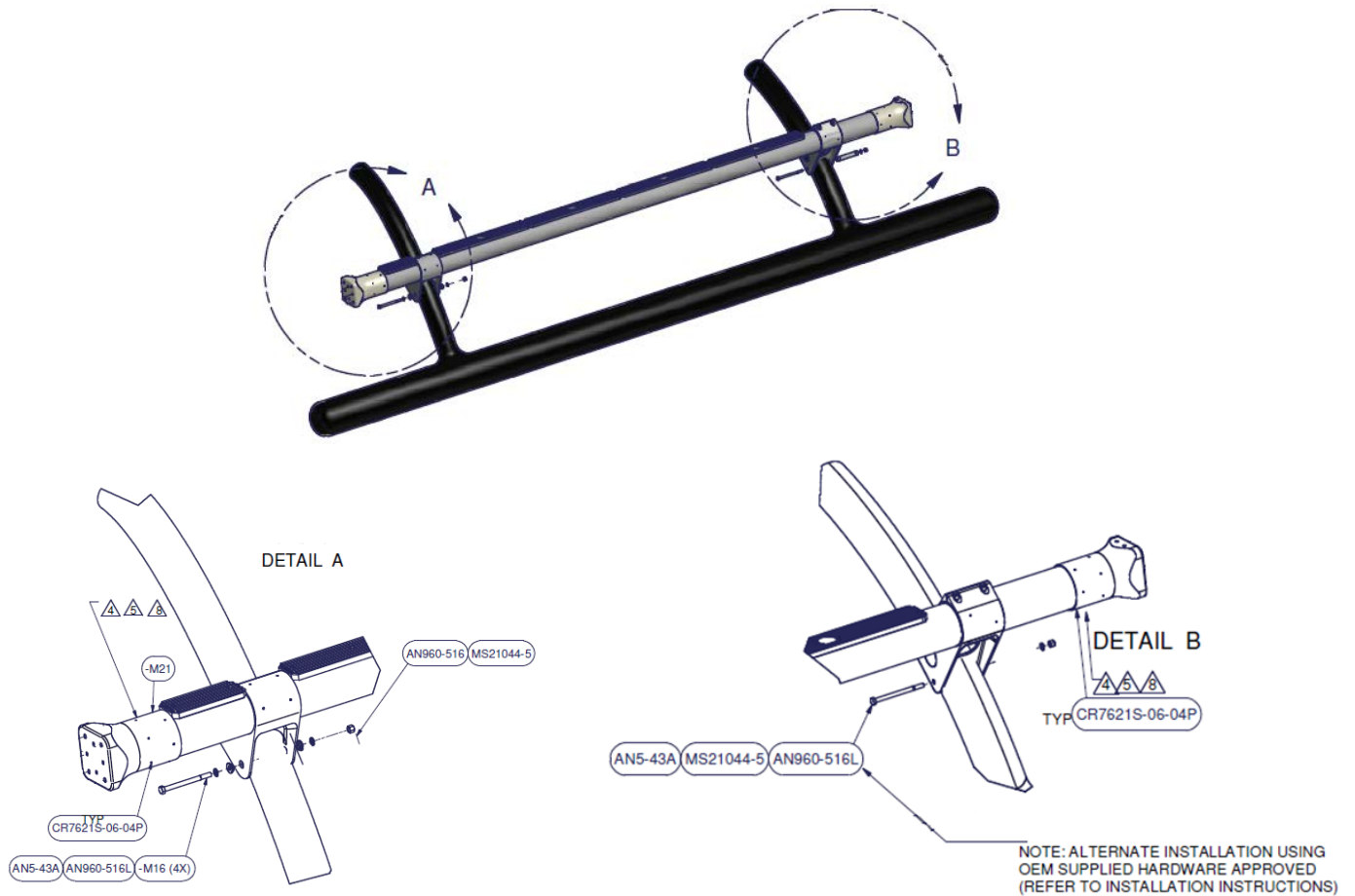


Figure 1 – AFM-SM117-1 Step Mount Installation Detail Views (C-2 Model LH Installation)

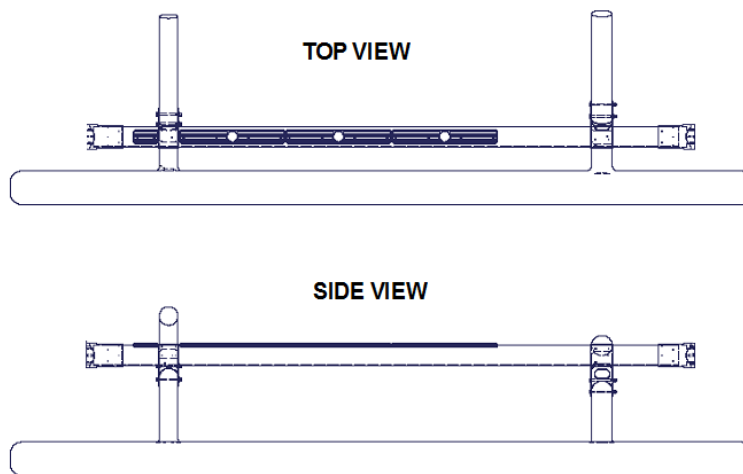


Figure 2 – AFM-SM117-1 Step Mount Installed Views (C-2 Model LH Installation)

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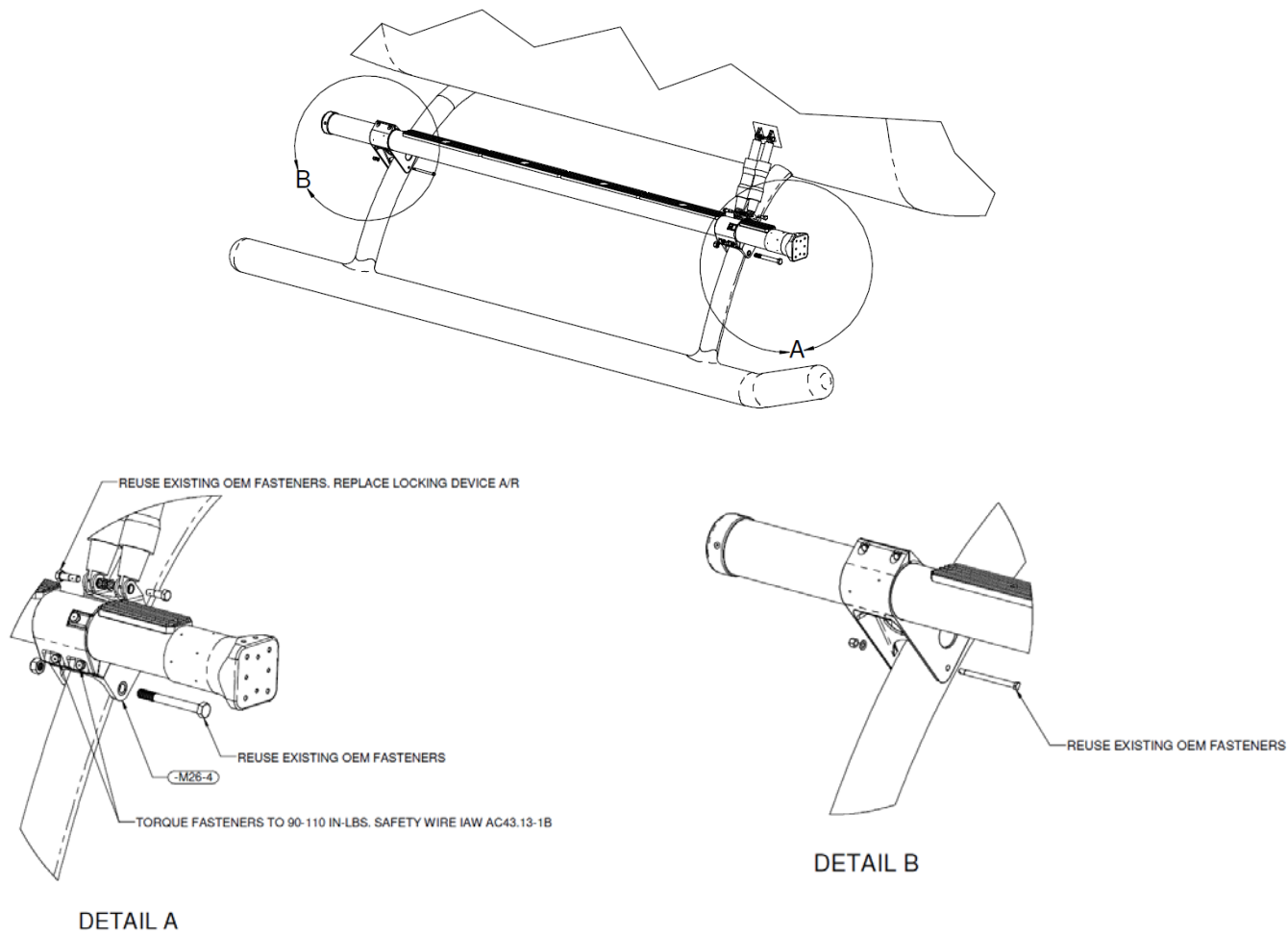


Figure 3 – AFM-SM117-1 Step Mount Installation Detail Views (D-2 Model RH Installation)

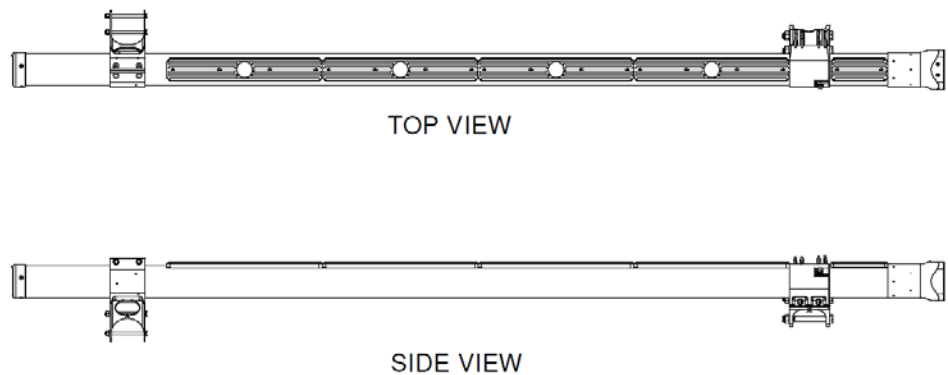


Figure 4 – AFM-SM117-1 Step Mount Installed Views (D-2 Model RH Installation)

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PARTS LIST

Parts List		
QTY	PART NUMBER	DESCRIPTION
A/R	AFM-SM117-10	LH UTILITY STEP ASSY BK117 SERIES (EC145)
A/R	AFM-SM117-11	RH UTILITY STEP ASSY BK117 SERIES (EC145)
A/R	AFM-SM117A-10	LH STEP ASSY BK117 SERIES (EC145) (LONG STYLE)
A/R	AFM-SM117A-11	RH STEP ASSY BK117 SERIES (EC145) (LONG STYLE)
A/R	AFM-SM117D-10	LH UTILITY STEP ASSY BK117 SERIES D-2 MODEL (EC145)
A/R	AFM-SM117D-11	RH UTILITY STEP ASSY BK117 SERIES D-2 MODEL (EC145)
A/R	-M16	BUSHING
A/R	-M21	END TUBE ATTACHMENT CAP
A/R	-M22	END TUBE CAP
A/R	-C10	SHORT ARM UTILITY BRACKET
A/R	-C11	MEDIUM ARM UTILITY BRACKET
A/R	-A10	LONG ARM UTILITY BRACKET ASSY CF STYLE
A/R	-A11	LONG ARM UTILITY BRACKET ASSY DT STYLE
A/R	MS21044-5	STOP NUT
A/R	AN960-516(L)	WASHER
A/R	DIN65268-09AMJ OR AN5-42A	HEX BOLT
A/R	AN5-43A	HEX BOLT
A/R	AN960-416(L)	WASHER
A/R	MS20004	INTERNAL WRENCHING BOLTS 1/4 X 28
A/R	MS20005	INTERNAL WRENCHING BOLTS 5/16 X 24
A/R	CR3213-6-4	RIVET CHERRY MAX
A/R	CR3213-6-6	RIVET CHERRY MAX
A/R	3591-4CN500	1/4 X 28 X .5 UNF LOCKING HELICOIL (MIL 21209 OR EQVL)
A/R	3591-5CN625	5/16 X 24 X .625 UNF LOCKING HELICOIL (MIL 21209 OR EQVL)
A/R	AN4-4A	HEX BOLT
A/R	CR7621S-06-04P	BLIND BOLTS PULL TYPE

3.1 SCHEDULED INSPECTIONS

The scheduled inspections required by this document are contained on the following checklists. This checklist, when completed, is to become a permanent part of the AFM-SM117-1 STEP Mount records.

NOTE: There are no field repairs or overhaul allowed for the AFM-SM117-1 STEP Mount.

If any component fails the following inspections, the mount is to be removed from the helicopter and returned to Airfilm Camera Systems.

3.1.1 100 HOUR INSPECTION INTERVALS

The 100 hour time in service inspections consist of visually inspecting the critical area of the AFM-SM117-1 STEP Mount.

Due to the simplicity of the mount structure, all scheduled 100 hour inspections consist of the same items since the mount is inspected while installed on the helicopter.

The inspections per Table 1 are required while the AFM-SM117-1 STEP Mount is installed on the helicopter at the time in service interval as specified. The inspection is to be performed by maintenance personnel.

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Table 1 – 100 Hour Time in Service Inspections on Helicopter

Inspect. Interval Hours	Inspection	Maintenance Personnel Initial
100	Visually inspect components for cracks, nicks, dents or scratches	
	Visually inspect hardware for security and tightness	
	Visually inspect components for corrosion	
	Visually inspect damper mounting lugs on fitting and associated hardware	
	Inspect damper mounts on aircraft IAW OEM procedure (D-2 Model Only)	
	Check hardware for correct torques	

3.1.2 1000 HOUR TIME IN SERVICE INSPECTION INTERVAL

Remove appliance from the helicopter and disassemble per Section 4.0.

Table 2 – 1000 Hour Time in Service Component Inspections

Inspect. Interval Hours	Inspection	Maintenance Personnel Initial
1000	Visually inspect bolt holes for damage	
	Visually inspect components for corrosion	
	Visually inspect components for cracks, nicks, dents or scratches	
	Visually inspect damper mounting lugs and hardware	
	Inspect damper mounts on aircraft IAW OEM procedure (D-2 Model Only)	

3.2 SPECIAL INSPECTIONS

Rotor Strike: Inspect for signs of damage, or permanent set. Remove if indications exist.

Hard Landing: Inspect for evidence of ground contact or damage. Remove if indications exist.

3.3 INSPECTION LIMITS

The AFM-SM117-1 STEP Mount is to be removed from service and returned to Airfilm Camera Systems if the following inspection limits are exceeded.

Cracks:	Any indication
Bolt hole elongation	Any Indication
Corrosion:	Any Indication
Dents, scratches, wear or nicks:	Greater than 0.015 inches

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4.0 REMOVAL, DISASSEMBLY, REASSEMBLY AND INSTALLATION

4.1 C-2 MODEL INSTALLATION

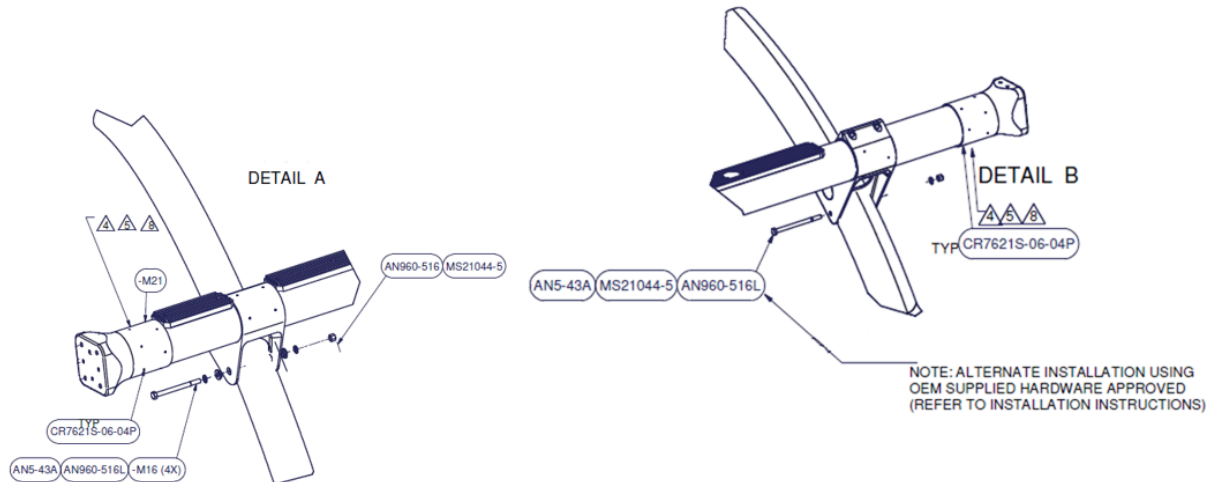


Figure 5 – AFM-SM117-1 Hardware Installation Views (C-2 Model)

- Align forward and aft landing gear skid fittings with holes on landing gear cross tubes as shown in Figure 5.
- Install:
 - 2 ea M16 shoulder bushing
 - 2 ea AN5-42A bolt or equivalent
 - 2 ea MS21044-5 nut or equivalent
 - 4 ea AN960-516L washer or equivalent
- Torque nut to 100-120 in-lbs
- Mark torqued hardware with torque seal
- Installation Complete

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4.2 D-2 MODEL INSTALLATION

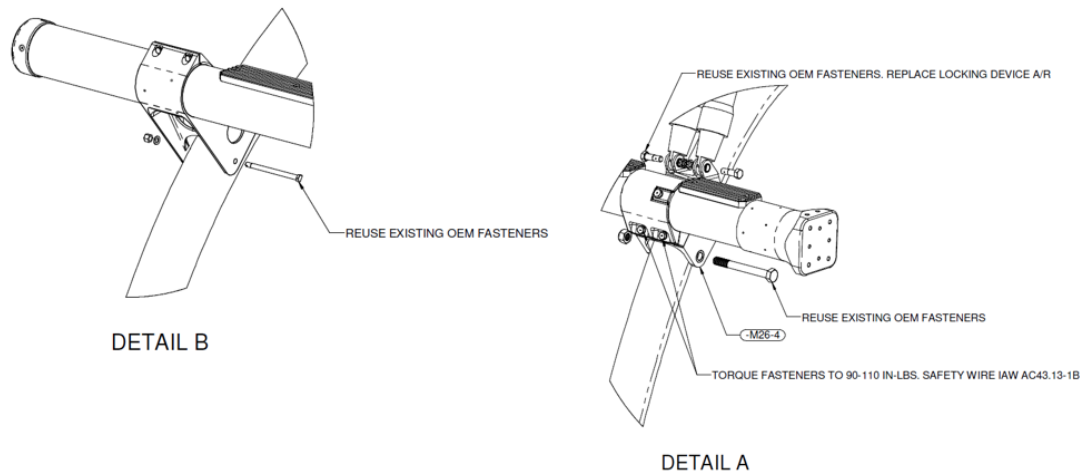


Figure 6 – AFM-SM117-1 Hardware Installation Views (D-2 Model)

- Align forward and aft landing gear skid fittings with holes on landing gear cross tubes as shown in Figure 6.
- Install:
 - 2 ea AN5-42A bolt or equivalent OEM Hardware
 - 2 ea MS21044-5 nut or equivalent OEM Hardware
 - 4 ea AN960-516L washer or equivalent OEM Hardware
- Use OEM hardware for damper mounting. Torque hardware to OEM recommended specifications.
- Torque nut to 90-100 in-lbs
- Mark torqued hardware with torque seal
- Replace OEM hardware locking device
- Installation Complete

4.3 REMOVAL (BOTH C-2 and D-2 MODELS)

- Remove QTY 4 bolts and associated nuts and washers from forward and aft Cross Tube Mount Fittings.
- Remove QTY 2 bolts and associated nuts and washers from Damper (D-2 Model only)
- Remove Step Mount
- Removal complete

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5.0 WEIGHT AND BALANCE

Table 3 – Component Weights

PART NO.	DESCRIPTION	WEIGHT (LBS)	STATION (IN)	BL (IN)
AFM-SM117-10	LH Utility Step Assy BK117 Series (EC145), Assy with -M21 Caps	27	164.2	-40L
AFM-SM117-11	RH Utility Step Assy BK117 Series (EC145), Assy with -M21 Caps	27	164.2	40R
AFM-SM117A-10	LH Utility Step Assy BK117 Series (EC145), Long Assy with -M21 Caps	29	164.2	-40L
AFM-SM117A-11	RH Utility Step Assy BK117 Series (EC145) Long, Assy with -M21 Caps	29	164.2	40R
AFM-SM117D-10	LH Utility Step Assy BK117 Series (EC145), D-2 Assy with -M21 Caps	30	164.2	-40L
AFM-SM117D-11	RH Utility Step Assy BK117 Series (EC145), D-2 Assy with -M21 Caps	30	164.2	40R
AFM-SM117-A10	Long Arm Bracket Assy, CF Style	16.8	Front 101.6 Rear 218.9	40R/-40L
AFM-SM117-A11	Long Arm Bracket Assy, DT Style	14.2	Front 103.5 Rear 216.9	40R/-40L
AFM-SM117-C10	Short Arm Utility Bracket	9	Front 105.3 Rear 215.1	40R/-40L
AFM-SM117-C11	Medium Arm Utility Bracket	9	Front 102.3 Rear 218.2	40R/-40L
V1725-1	Vibration Isolator	17.2	90.7	40R/-40L
MADT-11	Dovetail	2	90.7	40R/-40L
QDD	Quick Disconnect	3.5	90.7	40R/-40L