Service Bulletin

Title: AIR CONDITIONING – Condenser Inlet Duct and Tail Rotor Drive Shaft Inspection.

Revision	Issue Date	Checked By	Approved by
NC	20-SEP-2024	T. Wiklund	E. Volpe
A	23-SEP-2024	T. Wiklund	E. Volpe

Summary: This Service Bulletin requires immediate inspection of the tail rotor drive shaft below the condenser air inlet duct assembly before next flight.

Compliance: Mandatory before next flight.

Effectivity: Airbus Helicopter Deutschland GmbH (AHD) models MBB-BK 117 C-1 & C-2 with installed Air Comm Corporation air-conditioning system with the air ducts/fairing cutouts to the condenser.

Reference: FAA / STC # SR00601DE

Electrical: No change.

Weight & Balance: No change.

Labor: Labor hours are an estimate given for information only. It is estimated to take one airframe technician 0.5 hours to inspect the installation. It is estimated to take one airframe technician 0.5 hours to replace the duct assembly. Refer to the aircraft AMM/ICA for information on repair or replacement of the tail rotor drive shaft.

Approval: The technical aspects of this Service Bulletin are based on FAA approved data.

Discussion:
ACC has been made aware of multiple aircraft where excessive corrosion of the condenser inlet duct has allowed the internal support wire helix to break and protrude from the duct silicone shell and then impinging on the tail rotor drive shaft. In one instance, the tail rotor drive shaft was significantly compromised. It has also been noted on some installations that the duct support clamp was not aligned to the drawing representative position that would maximize the clearances.

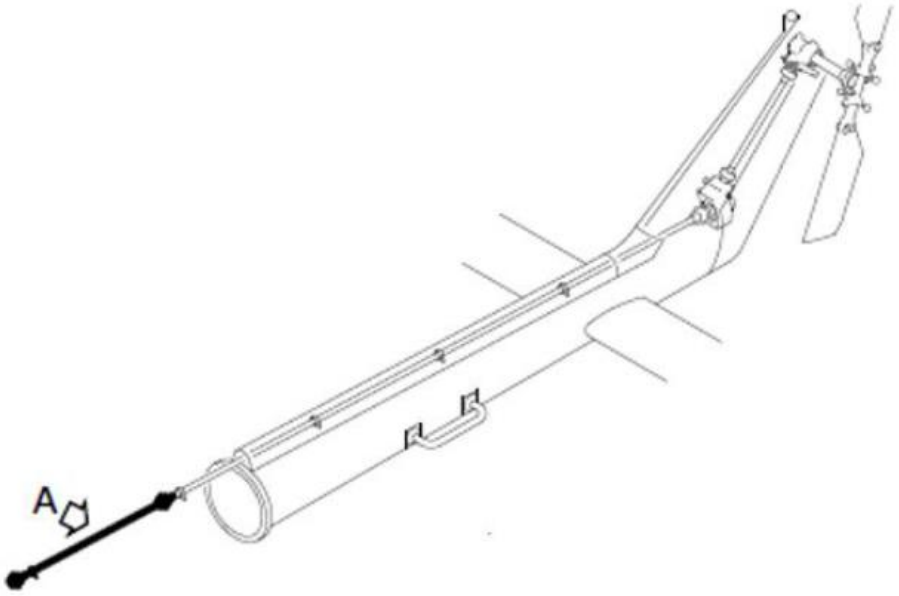

Figure 1 – Tail Rotor Drive Shaft – Location

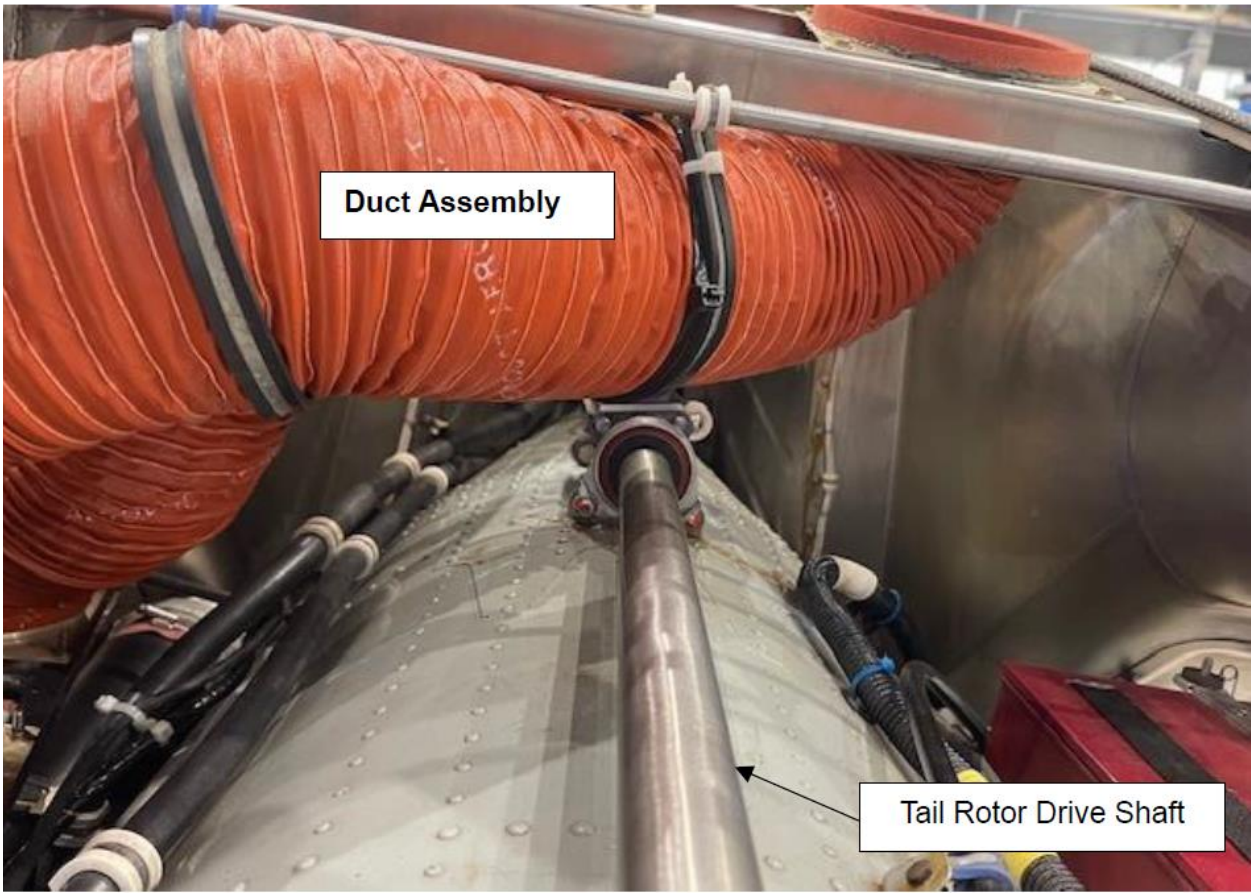

Figure 2 – Tail Rotor Drive Shaft and Duct Installation

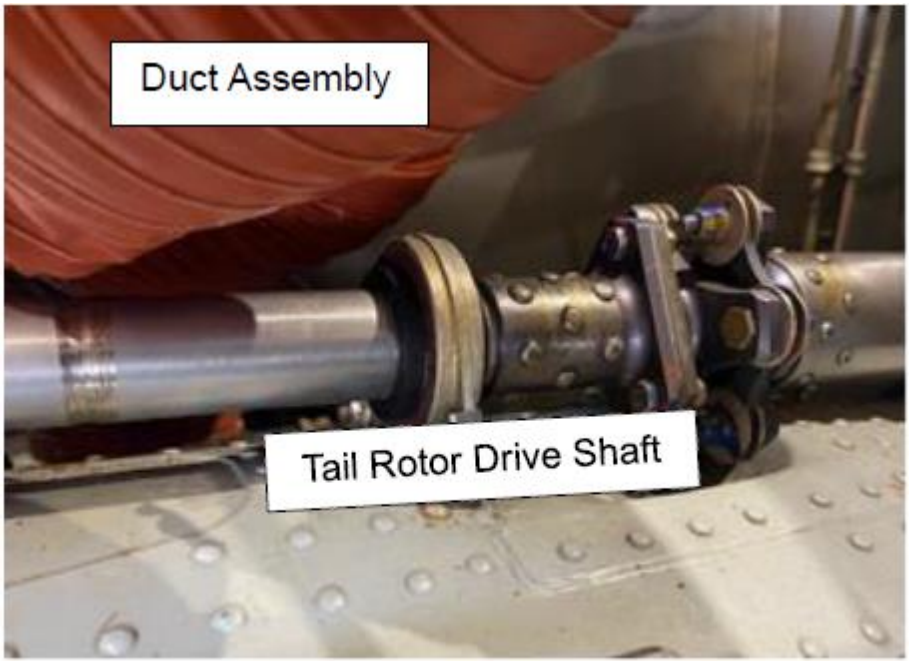

Figure 3 – Typical Damage

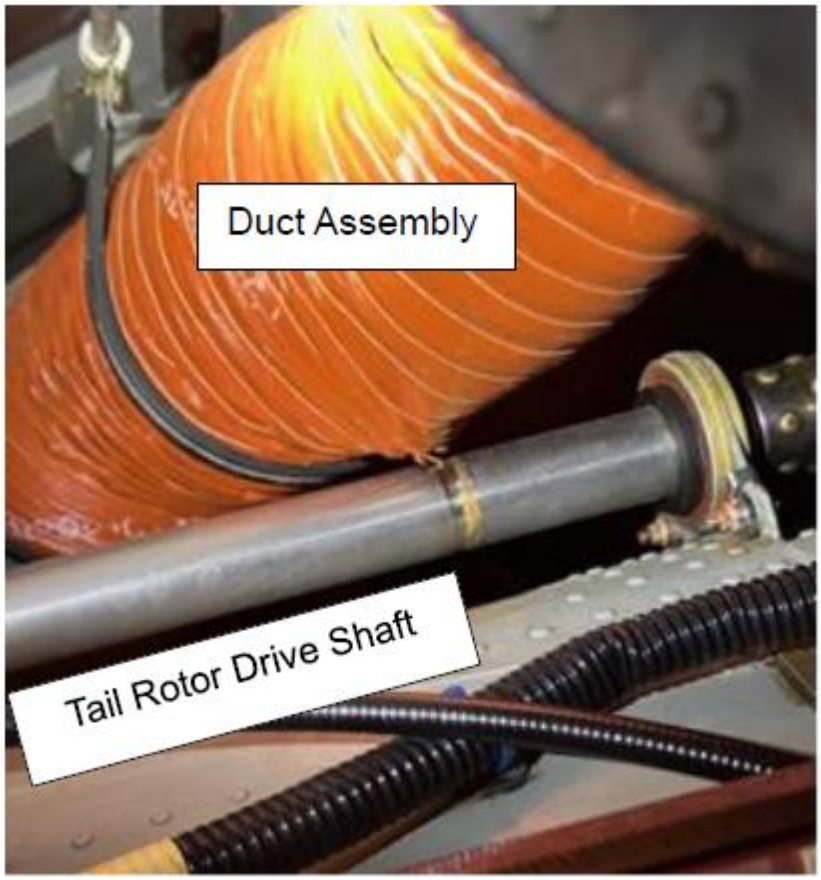

Figure 4 – Typical Damage with Low Positioned Clamp Shown

Revision History:
Revision NC is the no change, initial release.
Revision A updated figure photos and renumbered.

Required Materials for Ordering:
None

Optional Materials for Ordering:

EC145-7040-1	Air Inlet Duct Assembly
EC145-7024-16	Support Rod
AN3C3A	Bolt
MS21042L3	Nut
MS21043-3	Nut
MS21919WCH16	Clamp
MS27039-1-08	Screw
NAS1149C0332R	Washer
NAS1149F0332P	Washer
S325G80	Clamp

Accomplishment Instructions:

Warning: Comply with all general instructions and safety instructions per the applicable aircraft AMM.

Note: Torque hardware per AC43.13-1B.

1. Follow the aircraft AMM instructions and gain access to and inspect the tail rotor drive shaft in the location below the ACC condenser air inlet duct assembly.
    a. If the tail rotor drive shaft has any damage from contact with the condenser air inlet duct assembly, then notify AHD and ACC of the occurrence. If ferry flight is necessary, then consult AHD. Otherwise, repair or replace the tail rotor drive shaft per the applicable AHD AMM.
2. Inspect the installation and condition of the ACC condenser air inlet duct assembly p/n EC145-7040-1.
    a. Inspect the duct exterior condition. If any of the duct helix wire has broken and is protruding into or out of the silicone shell, then replace the duct assembly p/n EC145-7040-1 with a new assembly. Use the Figures in this document for the installation views, component orientation and required hardware.
    b. Inspect the duct interior condition and wire integrity. Minor surface corrosion of the wire helix is acceptable if it is less than 10% wire diameter and the silicone shell is not peeling or separating, otherwise, replace the duct assembly with a new one.
    c. Inspect the exterior clamp positioning. If it does not match the drawing Figures, in this document then rearrange the clamp to raise the duct positioning. Maintain a downward slope to the duct.
3. It is recommended to inspect the duct assembly condition every 50 flight hours or 6 months, whichever is less, when operating in high humidity, salty or rainy environments.

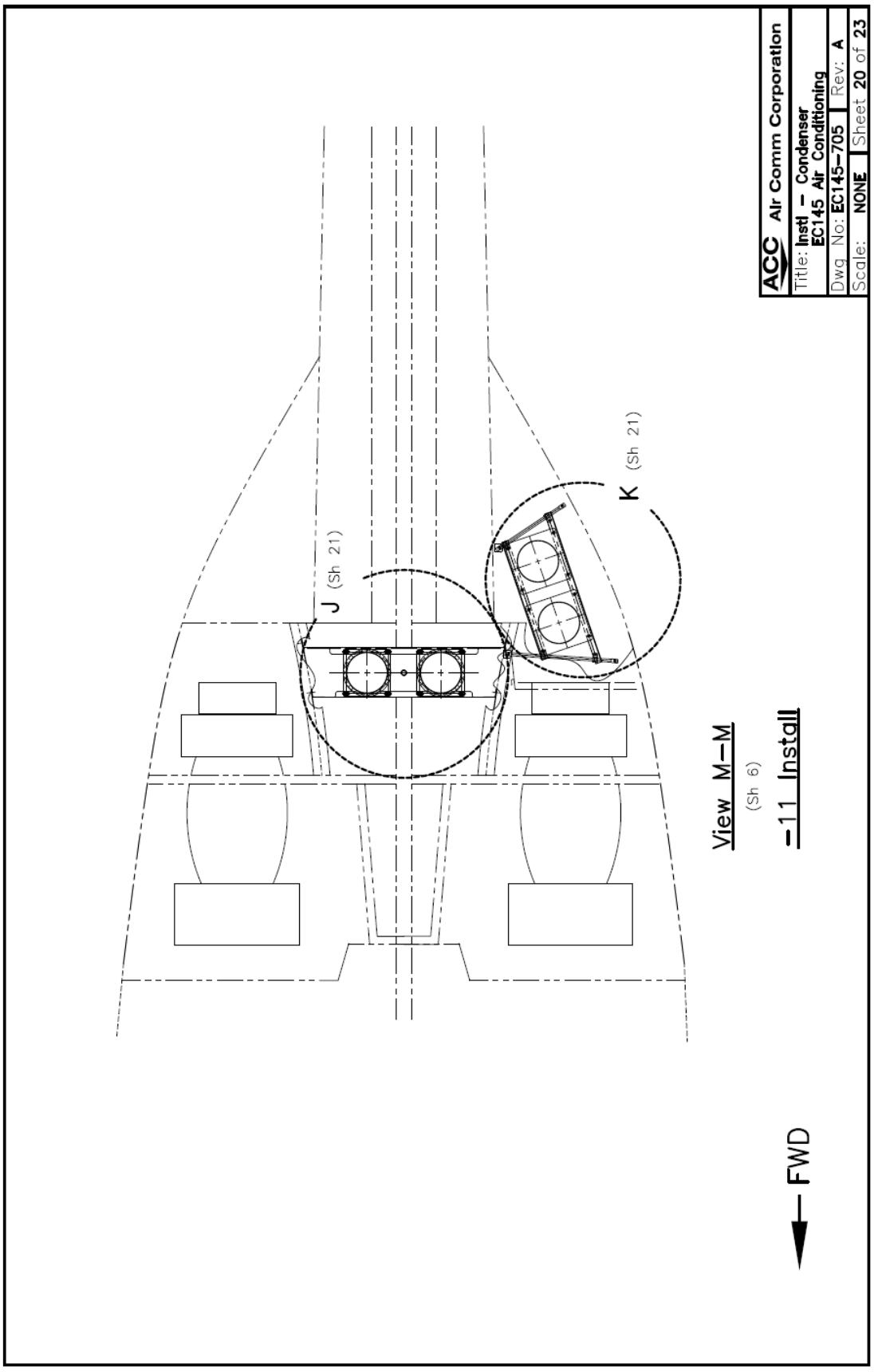

Figure 5: Drawing EC145-705 Rev A Sheet 20

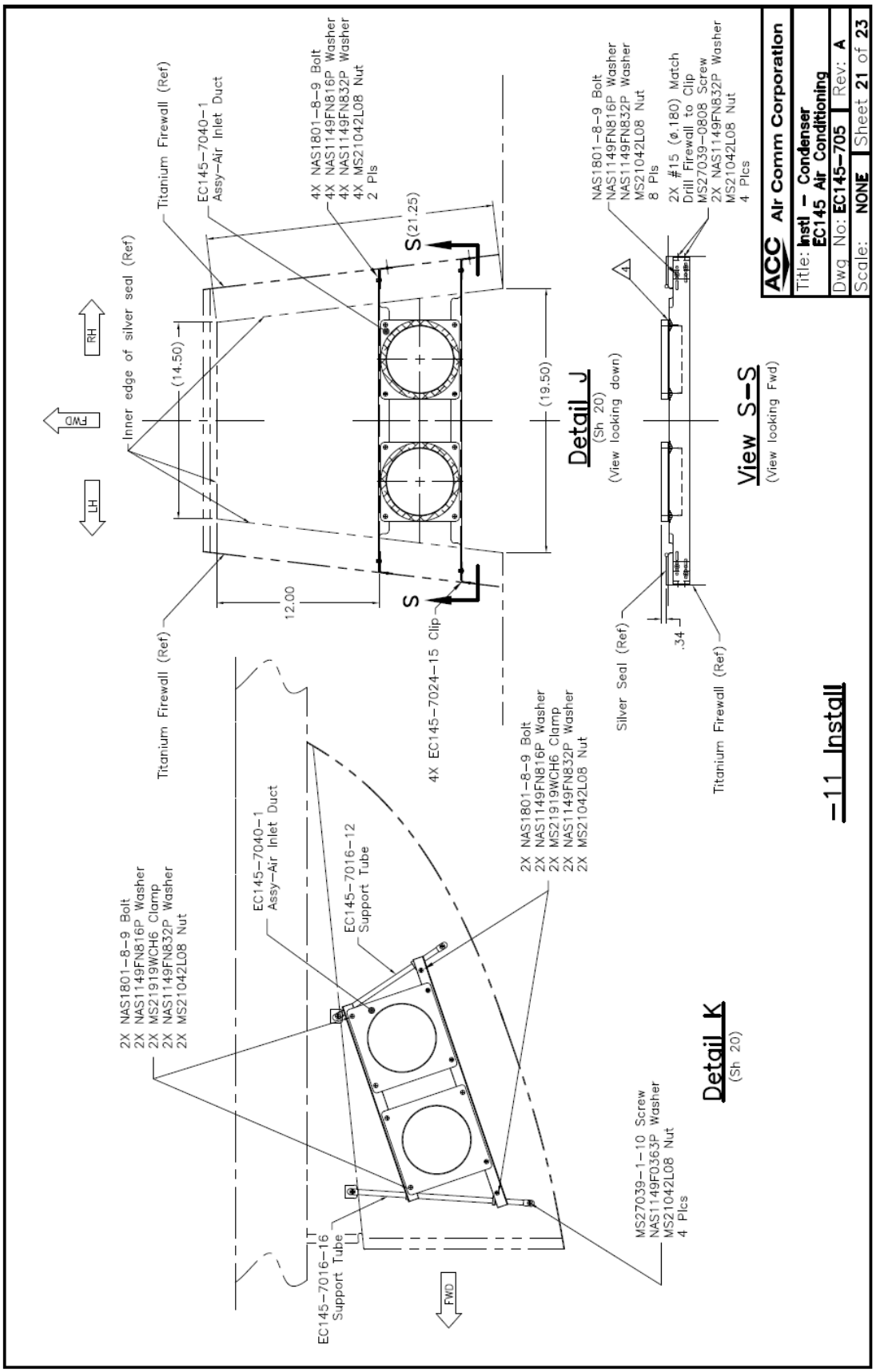

Figure 6: Drawing EC145-705 Rev A Sheet 21

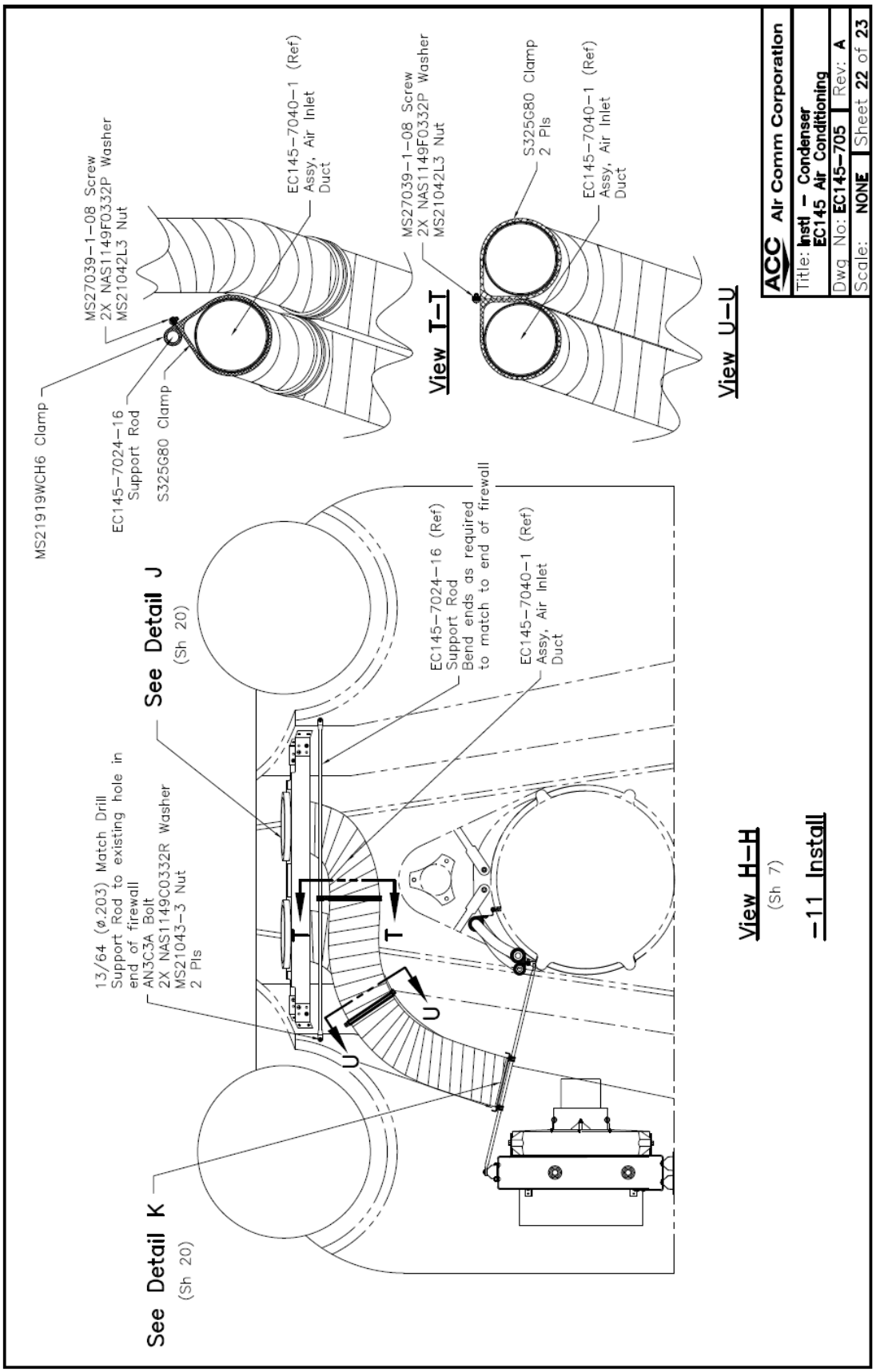

Figure 7: Drawing EC145-705 Rev A Sheet 22

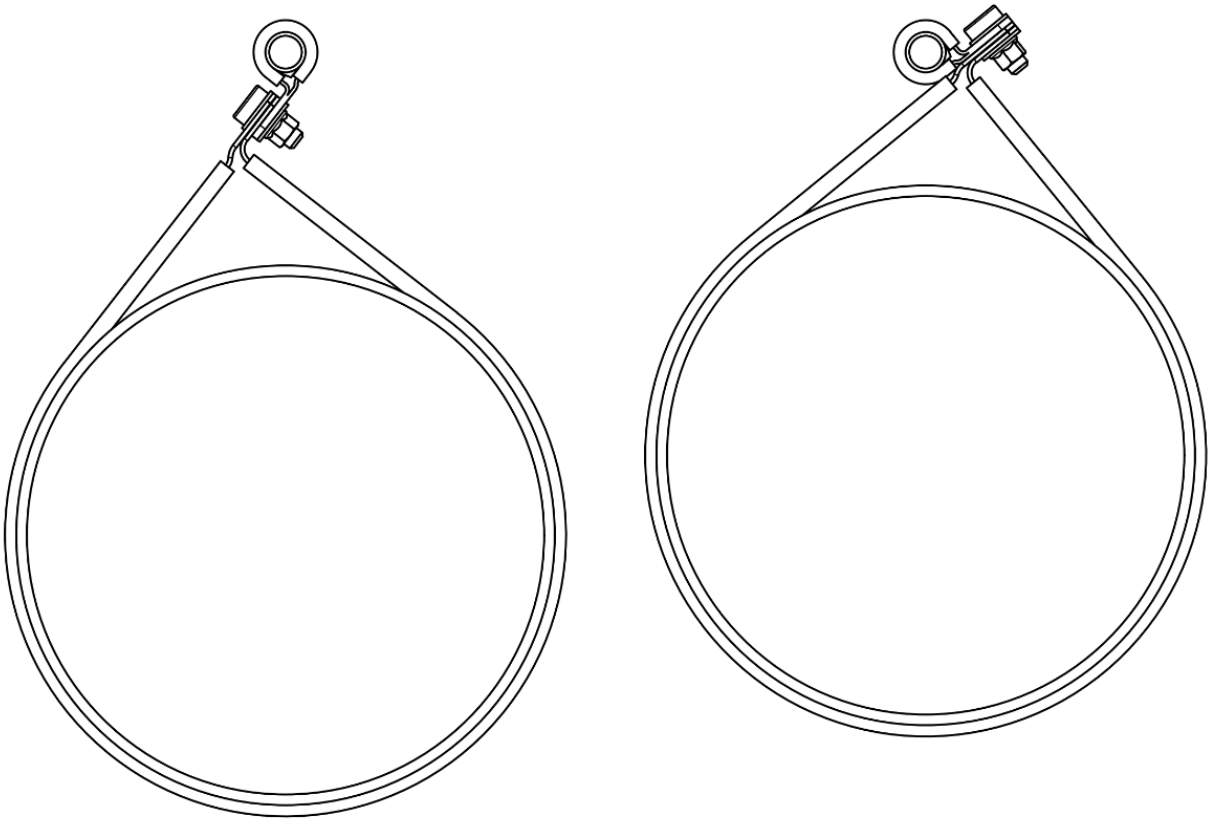

Figure 8 – Clamp Orientation Comparison