MECHANICAL TILT FRAM ANGLE C BLADE PACKAGE <u>WITH</u> INSTALLATION

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BACKGROUND / STATEMENT OF NEED
Hardwood Range personnel are required to conduct routine and corrective range maintenance in accordance with AFMAN 13-212, which mandates safe, efficient, and continuous upkeep of operational training areas. To meet these requirements, range staff must have equipment capable of moving, shaping, and clearing material in a controlled and safe manner. The addition of a 6-way angle blade will significantly enhance the team's ability to perform these tasks by allowing operators to angle the blade to efficiently "wing" material away from work areas and maintain proper terrain contours. This capability also enables dozer operators to safely displace soil and debris away from ditch lines without operating dangerously close to ditch banks, reducing the risk of equipment rollover or embankment failure. Furthermore, the blade's versatility provides a faster and more effective method for constructing fire breaks during wildland fire events, directly supporting emergency response and range safety operations. The required blade configuration offers full 6-way functionality while requiring minimal equipment modification and delivering the most cost-effective solution to meet mission needs.

1. GENERAL DESCRIPTION
The equipment shall consist of a complete angle blade package designed for installation on a crawler tractor. The package must include an angle blade, C-frame assembly, and all required brace groups, hardware, and hydraulic components necessary for full operational capability, as well as the installation of the new blade package.

The blade and C-frame assembly shall have an overall minimum width of 168 inches and shall function as a 6-way blade suitable for grading, cutting, and earthmoving operations. The C-frame shall incorporate six (6) pin-adjustment holes, enabling manual positioning of the blade at three (3) angle settings to the left and three (3) angle settings to the right. The assembly shall also include tilt cylinders that provide powered upward and downward blade tilt, ensuring precise control and enhanced operational versatility.

2. BLADE REQUIREMENTS
Blade Type: Angle blade capable of angling left and right.
Construction: Heavy-duty steel suitable for land clearing, road building, and similar high-impact applications.
Cutting Edge: Replaceable cutting edges required.
Wear Resistance: Blade structure must be designed to withstand continuous heavy-duty use.

3. C-FRAME ASSEMBLY
- Must be compatible with OEM tractor trunnions.
- Must be delivered as a fully assembled unit or modular components ready for installation.
- Frame shall be constructed of high-strength steel suitable for severe-duty environments.

4. HYDRAULIC SYSTEM
Tilt Function: Manual or hydraulic tilt acceptable; hydraulic tilt preferred.
Cylinders: Heavy-duty hydraulic cylinders with induction-hardened or otherwise wear-resistant rods.
Seals: High-pressure, long-life seals required.
Hose Routing: Must be arranged to minimize snagging, abrasion, and exposure to damage.

5. COMPATIBILITY REQUIREMENTS
- Must be compatible with the Government-owned crawler tractor.
- Must not require modification of the tractor beyond standard mounting procedures.
- All mounting hardware must be included.

6. PERFORMANCE REQUIREMENTS
- Blade must be capable of supporting land clearing, pioneering, and general construction operations.

- Assembly must withstand continuous heavy-duty use without structural deformation under normal operating conditions.
- Hydraulic components must operate under full system pressure of the host machine.

7. INSTALLATION REQUIREMENTS

- Equipment must be delivered fully assembled with clear installation instructions to contractor
- Removal of existing blade and installation of new blade by contractor.
- All hydraulic lines, fittings, and hardware required for installation must be included.
- The old blade and hardware must be kept in usable condition and returned to Hardwood Range.

8. WARRANTY

The equipment shall include the manufacturer's standard commercial warranty, covering defects in materials and workmanship.

9. DELIVERY

Hardwood Range personnel will deliver dozer with existing blade configuration and pick up the dozer with the new blade installed as well as the old blade and hardware.