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COMMUNICATIONS ZONE ETOUSA
OFFICE OF THE CHIEF ORDNANCE OFFICER
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ETO ORDNANCE TECHNICAL INTELLIGENCE REPORT NO. 181

SUBJECT: Test of Turret Traverse Speeds of Tiger II Tank

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1. General:

Tests were made with a German Pz. Kpfw. Tiger Model B tank to determine the speed of traverse of the turret in relation to the engine speed.

2. Turret Traverse Mechanism:

Since the turret is driven by the engine through a transfer case, the speed of the turret traverse is dependent upon the engine speed. A gear box provides two ratios for controlling the speeds of traverse. Selection of the ratio to be used is made with a shift lever located on the left of the turret drive housing.

The traverse is controlled by two foot pedals located on the turret floor ahead of the gunner. The left pedal is used for left traverse and the right pedal for right traverse. The traverse can also be controlled by a hand lever connected to the foot pedal linkage. The lever is pushed down for right traverse and pulled up for left traverse.

A hand traverse wheel is also provided. 700 revolutions of the handwheel traverse the turret through 360°.

3. Method of Testing:

Before starting the time tests, the engine and gearing were warmed for 30 minutes. Engine temperature during the tests was 60°C. (150°F.) The time required for the turret to traverse 360° was measured for engine speeds of 500, 1000, 1500 and 2000 r.p.m. for both the high and low ratio of the gear box and for right and left traverse. In all cases the turret was traversed from a standstill. Engine speeds in excess of 2000 r.p.m. were not used because of the possibility of damage to the engine.

4. Results:

It was found that, with the engine turning over at 2000 r.p.m. and with the high ratio engaged, the turret traversed 360° in 19 seconds. With low ratio, the time required was 40 seconds.

The following is a tabulation of data obtained during the test:

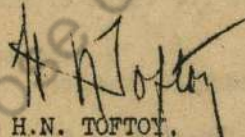
Engine Speeds (rpm)	Ratio Used	Direction of Traverse	Time - 360° Traverse (seconds)
500	High	Left	69
500	High	Right	68
500	High	Left	69
500	High	Right	68

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Engine Speeds (rpm)	Ratio Used	Direction of Traverse	Time - 360° Traverse (seconds)
1000	High	Left	37
1000	High	Right	35
100 1000	High	Left	37
1000	High	Right	35
1500	High	Left	25
1500	High	Right	25
1500	High	Left	25
1500	High	Right	25
2000	High	Left	19
2000	High	Right	18
2000	High	Left	19
2000	High	Right	19
1000	Low	Left	77
1000	Low	Right	75
1500 1500	Low	Left	52
1500	Low	Right	50
2000	Low	Left	40
2000	Low	Right	40

For the Chief Ordnance Officer,


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