

AIR ATTACKS AGAINST GERMAN RAIL
SYSTEMS DURING 1944

TRANSLATED BY

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AIR OPERATIONS AGAINST THE GERMAN

RAIL TRANSPORT SYSTEM DURING

MARCH, APRIL AND MAY 1944

I. Situation

It has always been part of the enemy's bombing policy to attack the German rail transport system, the aim being to undermine the entire production and supply economy of Germany. ("Long term target policy".) However, the unusual intensification of such attacks, most marked since March 1944, clearly indicates, as the Wehrmacht communique of 13.5.1944 pointed out, that it is closely linked with the enemy's invasion plan.

The term "invasion" is used here in a wider sense as meaning the final phase of the war ("Invasion phase"), the sense in which it is used by the British and the Americans, who hope to force a decision by making a massed landing and setting up a war front on the Continent.

Target areas in which enemy air forces operate against the rail communications system are divided into three zones:

- 1) the area of Northern France and Belgium - the zone of invasion in the narrower sense of the word;
- 2) the intermediate zone between the German and the French-Belgian transport systems, including the traffic barrier created by the Rhine valley;
- 3) the rail system within Germany itself, particularly the main routes to the west.

The attack of the Invasion phase covers zones 1 and 2 consecutively. The rail system within Germany remains as before a target of enemy air attacks.

In zone 1, the systematic destruction that has been carried out since March of all the important junctions of the entire network - not only of the main lines - has most seriously crippled the whole transport system (railway installations including rolling stock). Similarly, Paris has been systematically cut off from long distance traffic, and the most important bridges over the lower Seine have been destroyed one after the other. As a result, supply services for the civilian population in the narrow invasion area has been disrupted. It is only by exerting the greatest efforts that purely military traffic and goods essential to the war effort, e.g. coal, can be kept moving.

All the important through stations in Zone 2 have been put out of action for longer or shorter periods by heavy bombing raids, particularly by those carried out during April and May. The following must be mentioned specially:

- | | | |
|---------------|---|---|
| Aachen | } | on the line Cologne - <u>Idège</u> - Paris |
| Menzen | | |
| Trier | } | on the line Coblens - Metz - Chalons - Paris |
| Diedenhofen | | |
| Metz | | |
| Baarbrücken | } | on the line Frankfurt a. M. - Bingen - Nancy - Troyes - Orleans |
| Sarreguemines | | |
| Nancy | | |

Strasbourg)
 Mulhouse) on the line Mannheim - Strasbourg - Luneville - Dijon, and on the
 Belfort) Karlsruhe
 line Mulhouse - Belfort - Lyons - Marseilles

Traffic junctions on or near the Rhine have always been targets for enemy attacks, in conjunction with the "long term" offensive against German communications (cf. Duisburg, Düsseldorf, Cologne, Mannheim, etc.). However, since April 1944, i.e. during the invasion period, a new wave of attacks has been carried out against the following junctions on the above mentioned east-west main lines:

Cologne,
 Frankfurt a. M.,
 Mannheim/Ludwigshafen,
 Karlsruhe

The Rhine bridges are in a category of their own; since they constitute the most important bottle-necks in the east-west rail communications system, they have been treated as top priority invasion targets.

Following attacks in April that caused little lasting damage, in May the first bridge over the Rhine - the one at Duisburg - was destroyed "according to plan" in a large scale attack.

Attacks against the communications system inside Germany (cf. 3) have long been carried out, independently of the opening of the invasion phase, in accordance with the long term strategic bombing policy. However, it is noticeable that with the development of the air offensive against Zones 1 and 2, the enemy tends more and more to attack such vital points of the communications system inside Germany as are closely connected with the flow of traffic to the west. The following examples should be mentioned:

In the rail network of north-west Germany:

Osnabrück, Münster,
 Hanover, Löhne, Hamm,
 Magdeburg, Paderborn, Hagen.

In the rail network of central and south-west Germany:

Kassel
 Weissenfels, Weimar } - Frankfurt a. M.
 Schweinfurt, Darmstadt
 Nuremberg, Stuttgart,
 Ulm.

II. Assessment

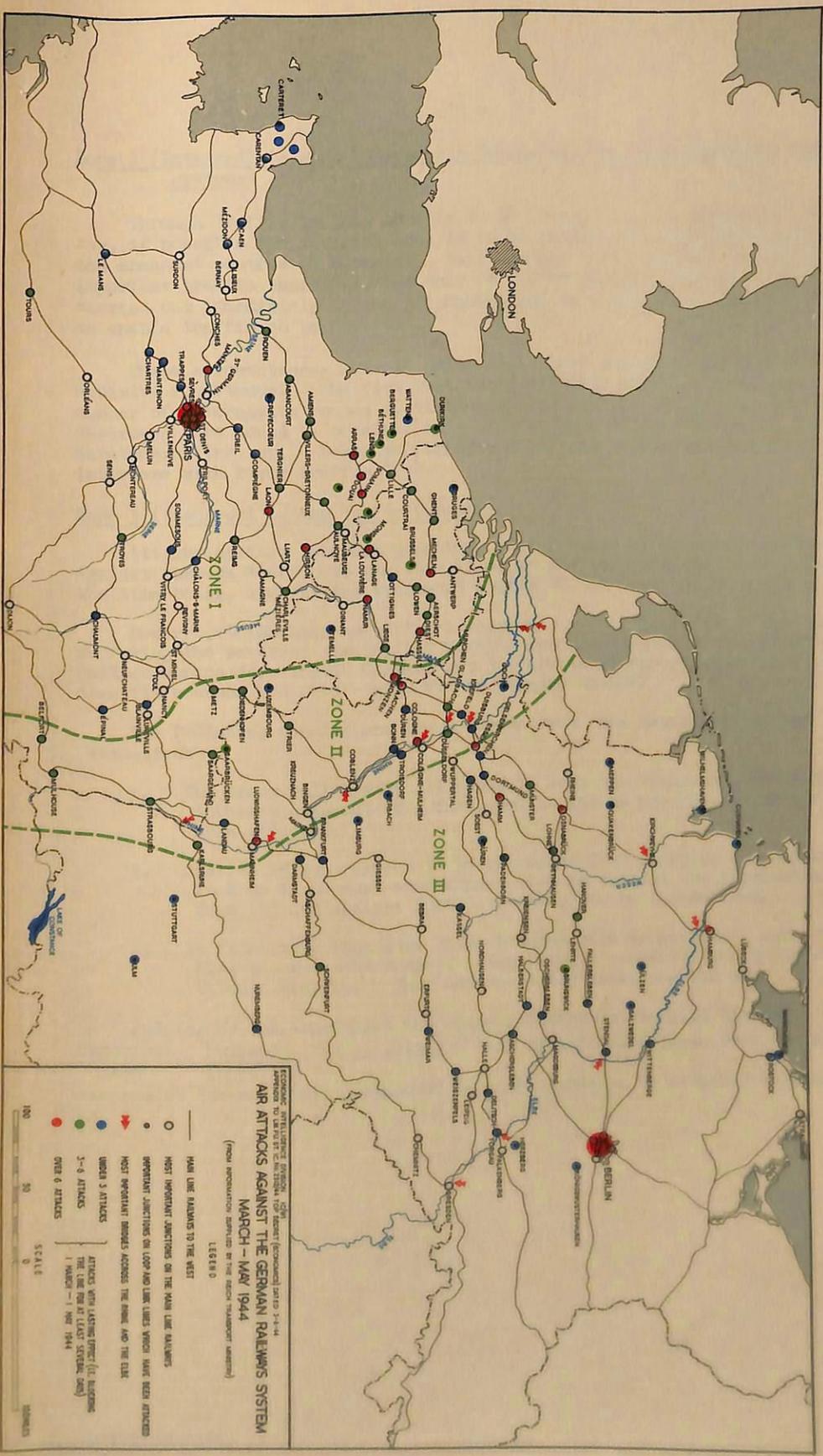
The Reich Transport Ministry believes that the systematic way the attacks against rail communications are being carried out indicates that they are planned with the co-operation of experts fully conversant with the working of German railways.

The following over-all picture of the offensive is deduced from the pattern of the attacks so far:

Zone 1 (German occupied western region)

The rail network is to be completely wrecked. Local and through traffic of any kind is to be made impossible, and all efforts to restore the services are to be prevented.

This aim has been so successfully achieved - locally, at any rate - that the Reichsbahn authorities are seriously considering whether it is not useless to attempt further repair work

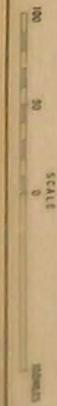


AIR ATTACKS AGAINST THE GERMAN RAILWAY SYSTEM
MARCH - MAY 1944

ECONOMIC INTERESTS IN THE WESTERN ZONE (covered part to 3-1-44)
 (from information supplied by the Reich Transport Ministry)

LEGEND

- MAIN LINE RAILWAYS TO THE WEST
- MOST IMPORTANT JUNCTIONS ON THE MAIN LINE RAILWAYS
- IMPORTANT JUNCTIONS ON LOOP AND LINK LINES WHICH HAVE BEEN ATTACKED
- MOST IMPORTANT BRIGADES ACROSS THE RHEIN AND THE ELBE
- ZONE I ATTACKS
- 3-6 ATTACKS
- OVER 6 ATTACKS
- ATTACKS WITH LASTING EFFECT (i.e. burning the line for at least several days)
- 1 MARCH - 1 MAY 1944



Zone 2 (Intermediate zone between the German and the Belgian-French railway systems)

Through traffic in this Zone is to be brought to a standstill; that is to say, if possible the invasion area is to be sealed off from the military, supply and armament centres of Germany. This aim has been realised at most of the important traffic junctions, but only for short periods, thanks to the repairs carried out immediately by the Reichsbahn and to the measures taken previously to enable traffic to be diverted.

These circumstances make it quite clear that the Rhine bridges are of decisive importance. The fact that there are only a few of them means that the number of alternative routes available is also small. If the bridges were destroyed they could be repaired only after a long delay - if at all for the duration of the war. Destroyed bridges would also block the waterway and interfere with river traffic.

Zone 3 (transport system inside Germany)

Attacks against the rail junctions listed under 3) above are aimed mainly against through traffic to the west, i.e. to the invasion area, and less, for the time being, against the transport system of the interior of Germany.

However, Reichsbahn authorities fear that since the railways are already suffering the severest strain, any further intensification of the attacks against rail communications inside Germany may jeopardise transport essential for arms, domestic economy and food - even within Germany itself.

The following conclusions may be drawn from this assessment of the situation:

1. The enemy will try at all costs to keep the transport system in the invasion area out of action, and as far as possible to extend the area affected.
2. Just as we must expect to be prevented from carrying out repair work in Zone 1, we must also expect attacks against the intermediate Zone (2) and against Zone 3 (Germany) to be intensified.
3. It is certain that more Rhine bridges will be attacked, and therein lies the greatest danger. The bridges concerned are those used by through traffic. They are specially marked on the map.

Judging by the importance the enemy attaches to the line Hanover - Osnabrück - Duisburg, it is assumed that of all the bridges over the Elbe Hamm Wuppertal the one at Stendal (Berlin-Hanover) is most liable to be attacked from the air.

Ic/WI

23. 6. 1944

AIR ATTACKS AGAINST THE GERMAN RAIL SYSTEM
IN THE SOUTH AND SOUTH-EAST - APRIL-JUNE 1944

The area may be divided into two large traffic zones:

- I. Southern France - Northern Italy, the bulk of traffic being carried by the railways.
- II. The south-east area and the Balkans, the traffic being carried by the rail - Danube combination.

I. The main traffic routes in the area southern France - northern Italy are:

1. The line through southern France: Dijon-Chalon sur Saone - Lyons - Avignon (with branch line to the west through Narbonne) - Marseilles - Toulon - Nice - Genoa - Spezia - Leghorn - along the Ligurian coast.
2. The Montcenis line through Besancon - Bourg - Chambéry - Turin - Alessandria - Parma - Bologna, with the branch lines:
 - a. Florence - Arezzo to Rome,
 - b. Forli - Rimini along the Adriatic coast.
3. The Brenner line through Innsbruck - Bolzano - Trento - Verona to Bologna.
4. The Vienna line through Leoben - Villach - Tarvisio - Treviso, and Graz - Laibach (Ljubljana) - St. Peter to Padua - Ferrara - Bologna.

The enemy has so far attacked all four lines systematically, in some cases with lasting effect.

Re 1 above:

The main targets are Lyons, Avignon, Marseilles, Toulon, Nice, Genoa and Spezia. It is worth noting that the enemy prefers to concentrate his attacks on the open coast between Toulon and San Remo, rather than in the Rhone valley where, from a tactical point of view, they would be more difficult to carry out.

Re 2 above:

Determined attacks are being made against the rail junctions at Turin, Alessandria, Piacenza, Parma, Bologna, Florence, Faenza, Forli and Rimini. In order to increase the effect of raids on these centres, heavy attacks have also been made against the loop line through Milan.

Re 3 above:

Attacks have been made against all the important centres (beginning at Augsburg and Munich) and especially against Innsbruck, Bolzano, Trento and Verona. The link line to the Vienna line (Vicenza) has also been effectively attacked.

Re 4 above:

Attacks have been concentrated against the outlet junctions at Vienna and Wiener Neustadt, on the more important lines in the south in the Graz, Trieste and Monfalcone areas and the very important junction of the two lines at Mestre and at Ferrara.

The plan of the attack shows that the enemy has made an accurate appreciation of the most vulnerable points on the lines. Attacks are not confined to stations and trackside installations, but are also especially directed against river bridges and viaducts. In some cases the damage caused is very heavy; for several weeks schedules have been very seriously dislocated, particularly south of the line Genoa - Bologna. Main line outlets in the rear areas of the front have already been so heavily damaged that it is almost impossible for heavier goods traffic still to get through.

II. The main traffic routes in the Balkans and the south-eastern area are:

1. The southern line through Raab = south of Budapest - Pecs (Fünfkirchen) - Osijek (Esseg) - Vinkovci (with loop line through Brod - Zagreb (Agram) to the Vienna line to Ljubljana (Laibach) - Belgrade - Nisch with the link lines
 - a) Skoplje - Salonika - Larissa to Athens,
 - b) Sofia - Plovdiv to the Turkish border.
2. The south-eastern line through Bratislava (Pressburg) - Budapest - Szolnok (with connection to the Vienna south line) in the sections:
 - a) Debrecen - Dej - Jacobeni - Pascani - Adjud along the east side of the Carpathians.
 - b) Arad - Simeria - Brasov (Kronstadt) - Campina - Floesti (with branch line to Bucharest) to the Danube (Fetesti).
 - c) Arad - Temesvar (Timisoara) - Turnu Severin - Bucharest.
3. The connecting line between Bucharest and Sofia through Fetesti - Danube bridge - Cernavoda - Kaspichan - Fleven, with the intermediate line Giurgu - train ferry - Ruschuk (Ruse).

The principal junctions (transfer docks) of Danube traffic with the rail network are Belgrade, Osijek (Esseg), Budapest, Bratislava (Pressburg), Vienna, Linz and Regensburg.

In contrast with the systematic paralysing of the southern France - northern Italy rail network, enemy attacks in the south-east area and the Balkans have been limited to isolated important points, owing to the great length of the lines.

No 1 above: The main targets attacked are Budapest, Osijek (Esseg) and Belgrade, which are the most important rail junctions and transfer ports for Danube shipping; also Brod, Nis (Nisch) and Sofia. So far the railways in southern Greece and eastern Bulgaria to the Turkish frontier have not been attacked.

No 2 above: Attacks causing lasting damage have been made against the rail and river junctions of Bratislava and Budapest, against Debrecen on the northern line to the Carpathians, against Brasov (Kronstadt), Campina and Floesti on the north Rumanian line, and against Turnu Severin, Fetesti and Bucharest on the southern line to Bucharest.

No 3 above: So far, effective attacks have not been made against the connecting line Sofia - Bucharest, except against Giurgu, where oil traffic is reported to have been particularly affected.

The Danube is being mined at strategic points on open stretches of the lower reaches between Vidin - Lom - Giurgu, between Belgrade - Smerderevo - south of Bela Crkva (Weisskirchen) on the middle reaches, and between Osijek - Vukovar - Novi Sad (Neusatz) above Belgrade.

In spite of the limited choice of targets, rail traffic has been seriously hit, particularly in the Bosnia - Serbia area and in western Rumania; the terminal points of Danube shipping are very vulnerable, and damage at points where goods are transferred from rail to Danube shipping, and vice versa, causes great disruption. An important role is also played by the partisans who are continually cutting the railway lines at many points.

Ic/WI

13. 5. 1944

THE TRANSPORT MINISTRY'S VIEW OF RECENT AIR

ATTACKS ON RAILWAYS

(Discussion with Ministerialdirektor Dr. Ebelung and Ober-Regierungsbaurat Dr. Rothe/Abt. I)

The extraordinary intensification of Anglo-American air attacks in recent weeks against railway junctions, construction and repair shops and rolling stock clearly points to large-scale strategic moves by the enemy.

The enemy's plan to cripple the railways in northern and central Italy over as wide an area as possible has already been greatly assisted by local conditions. The effects of important main and branch line junctions being put out of action are made much more serious owing to the relatively small number of lines, and hence, to the fact that there are very few possibilities for diverting traffic on the main north - south line; another factor is that it is difficult to construct railways in mountainous country because of the large number of bridges, cuttings, tunnels, etc. that are required. Just recently damage and blocking have caused such dislocation on the lines that it has become almost impossible to move the most important trains transporting troops and supplies to the front. It is to be feared that as a result the Army's freedom of action on the Italian front will be considerably reduced.

In the occupied areas of the west, particularly in Belgium and northern France, the raids carried out in recent weeks have caused a systematic breakdown of all main lines; the coastal defences have been cut off from the supply bases in the interior, thus producing a situation which threatens to have serious consequences. Although even the transportation of essential supplies for the civilian population has been completely stopped for the time being, and only the most vital military traffic is moved, large scale strategic movement of German troops by rail is practically impossible at the present time, and must remain so while attacks are maintained at their present intensity.

40,000 workers of the Todt organisation and, in addition, a large number of Army units (engineers and construction companies) have been made available in order to carry out temporary repairs to tracks at critical points and to railway installations at important junctions. Although in this way it has so far usually been possible to start moving traffic again on an emergency basis after a short delay, the repairs are never completely successful as the enemy repeatedly attacks important and vulnerable points. The protection provided by the defences is far from adequate. Consideration has therefore already been given to the question of whether the forces engaged on repair work should not instead be used to reinforce anti-aircraft units, though it is to be feared that this would result in freeing the enemy forces that have been reserved for carrying out repeated attacks on railway installations that have been repaired, and they would thus be able to attack other installations that

are at present intact. The effect of attacks would thus accumulate in the most dangerous manner.

In the west and south-west of Germany, the systematic attacks against the main lines to the west, and particularly along the Rhine line (Cologne, Coblenz, Aachen, Saarbrücken, Metz, Mulhouse) have seriously dislocated long-distance traffic from the main production centres to troops and supply depots in the west. There have also been most effective attacks against the outlet of Ruhr traffic to the west (Essen) and to the east (Hamm). Large loop lines have also been heavily attacked (Osnabrück). If successful attacks against the most critical bottle necks (the Rhine bridges) have not so far been carried out, it is clear that this is due to tactical rather than strategic reasons.

In assessing the situation as a whole it must further be borne in mind that owing to the widespread destruction and damage of important construction and repair shops, the maintenance and overhaul of locomotives has been considerably disorganised; this causes further critical dislocation of traffic.

In general, the situation regarding rail traffic appears to give rise to so much anxiety that an effective defence must be demanded in order to prevent further curtailment of military and industrial traffic.

Ic/Wi

4. 7. 1944

Memorandum

Conference between Ministerialdirigent Dr. Ebeling
of the Reich Transport Ministry and the Economic Intelligence Division

Dr. Ebeling is in complete agreement with the view of the Economic Intelligence Division that in June enemy air attacks were quite clearly concentrated against rail communications and the distributive side of the oil industry; in contrast, there was a marked decline in attacks against other targets (aircraft and key industries, terror raids).

Dr. Ebeling believes it is clear that the enemy is doing his utmost to give air support to his ground forces engaged in static fighting in the French invasion area and in central Italy by completely demolishing the transport routes to the fronts (creating the so-called "traffic wilderness" in the area immediately behind the front, cutting up the main supply routes from the rear areas). In northern France north or west of a line Granville - Surdon - Evreux - Mantes - Creil - St. Quentin - Arras - Dunkirk and in northern Italy south of a line Genoa - Parma - Mantua - Padua - Mestre - Trieste it is scarcely possible still to maintain even emergency rail traffic. Furthermore, by attacking an ever increasing number of loop and train lines, especially in France, the enemy is endeavouring to carry the dislocation of traffic further into the rear areas. The spread of this pattern of attacks completely covers the zones marked on the map of France and Italy by the Economic Intelligence Division (Ic/Wi). Dr. Ebeling also agrees with the demarcation of the zones in the south-eastern area showing how attacks have been concentrated against the rail system. He, too, is of the opinion that the Balkan line proper south of Nisch is of no interest to the enemy, since the destruction of the lines in the north have left it in a state of suspension; when the expected offensive in the Balkans takes place from central Italy after Ancona and Rimini have been captured, the line south of Nisch will fall into the enemy's hands "like a ripe fruit" when he has cut off the area in the south of the Balkans.

In the course of his tour of northern France with the Minister in the early days of the invasion, Dr. Ebeling was able to see for himself that all the Seine crossings were blocked, so that even the most urgent troop movements had to be carried out by diverting them via the main lines south of Paris.

With regard to the Balkan offensive, Dr. Ebeling thinking it is worth noting that Churchill stated goods trains would purposely be allowed to reach Bulgaria and Greece so that their troops could later capture the materials without bother. Churchill spoke of German troops on the Greek islands and in Greece as "virtual prisoners", the only difference being that up to now Germany had to feed them.

In grading air attacks against rail targets according to intensity, Dr. Ebeling places the area of northern France first, followed by northern Italy and lastly the East.

A.H.B(6) Distribution

Same as Translation VII/122