If an enemy force after the pursuit lands on neutral terrain, combat action against it shall cease.

The acts of air warfare permitted over neutral terrain have one single objective, namely, combat action against the enemy, but not combat action against the neutral. Combat action against a neutral nation shall commence only under orders from the Commander in Chief of the Air Force.

Reference: Rule 2, Item 1.

**ACTS OF AIR WARFARE OVER NEUTRAL TERRITORIAL WATERS**

Even in those cases in which military air vehicles are permitted to cross over neutral territorial waters (see Rules 5 and 6), they shall not while over such waters attack enemy aircraft. However, they shall have the right to defend themselves if they are attacked by the enemy.

Reference: Rule 2, Item 2.

**AREAS OVER WHICH ACTS OF AIR WARFARE ARE PROHIBITED BY REASON OF TREATIES ENTERED INTO BY GERMANY**

Such areas and waters are:

The Aaland Islands and the Suez Canal.

Operations against the Aaland Islands and the Suez Canal are subject to approval by the Commander in Chief of the Air Force. Germany is not a party to the treaties concerning the Dardanelles and the Panama Canal, so that she would have a free hand to act there if Turkey and the USA should participate.
in the war.

2. AIR SOVEREIGNTY DURING WAR

Reference: Rule 5.

FLIGHT OVER NEUTRAL TERRITORIAL WATERS

It is to be assumed that neutral nations will prohibit flight over their territorial waters. The territorial waters over which air vehicles are permitted to fly will be made known by the Commander In Chief of the Air Force.

Reference: Rule 5.

FLIGHT OVER THE ENTRANCES TO THE BALTIC SEA

The Little Belt will only be flown over in cases of emergency and danger, because it is so narrow in parts that violations of the territorial right of Denmark can hardly be avoided.

In war the limitation imposed for times of peace on flight over the entrances to the Baltic Sea (maximum size of unit to be 1 squadron at one time) will be rescinded.


CIVILIAN AIR TRAFFIC OVER GERMAN TERRITORIES

The measures stated in Rules 7-9 shall at all times be ordered by the Commander in Chief of the Air Force. In the case of a traffic prohibition in terms of Rule 7, the
conditions stated in Rule 27 will apply. In the case of a
traffic prohibition imposed in terms of Rule 8, special
instructions will be issued.

C. MILITARY AIR FORCES

a. Military Air Vehicles.

Reference: Rule 10, Item 2.

PERSONNEL OPERATING MILITARY AIR VEHICLES

Officials of the military establishment naturally are
also members of the military forces.

Medical officers may only fly medical air vehicles.

Reference: Rule 11.

TREATMENT OF CIVILIAN AIR VEHICLES FOUND PARTICIPATING
IN ACTS OF AIR WARFARE

Enemy and neutral air vehicles committing acts of air
warfare (see explanations to Rule 1) or transporting troops
will be destroyed. The crew will be tried under martial law.


CONVERSION OF CIVILIAN AIR VEHICLES TO SERVE AS
MILITARY AIR VEHICLES

The change of status shall only be valid if the condi-
tions stated in Rules 10 and 12 are fulfilled. By Ger-
man concepts a change of status on or over the high seas is per-
missible.
b. CREWS OF MILITARY AIR VEHICLES.

Reference: Rule 15.

SPIES

Rule 16 naturally does not apply to spies.

Reference: Rule 17.

ESCAPE BY PARACHUTE

If such persons resist capture after landing, attack against them is permissible.

D. THE MEANS OF AIR WARFARE

No Remarks.

E. AIR ATTACK


MILITARILY IMPORTANT TARGETS

It is necessary to refrain with intent from enumerating the targets which may be attacked. Every target is of military importance which is of significance in the conduct of war by the enemy. Of military importance, for example, are such targets as water, gas, and electricity supply systems, food storage depots, bread factories, and refrigeration storage houses.


Terrorizing attacks against the civilian population
are contrary to international law. Nevertheless, the military situation might even make attacks of this type necessary. Orders to carry out such terrorizing attacks will be given exclusively by the Commander in Chief of the Air Force.

"Property without military significance...." will not be attacked anyway because such action would not serve military interests. Their mention in the Rules is only for formal reasons.


TARGETS FOR ATTACK LOCATED IN Densely Populated Areas

Targets in densely populated areas or in the immediate vicinity of objects against air attack is prohibited (in terms of Rules 21 and 25) may only be taken under precision bombing attack.

Reference: Rule 25.

THE IDENTIFICATION MARKING OF OBJECTS AGAINST WHICH ATTACKS ARE PROHIBITED

The opponent shall make known the nature of the markings used to identify objects to be spared attack in accordance with this Rule. If any cases of abuse are determined during a war, the Commander in Chief of the Air Force will issue orders that attacks against such objects as are not entitled to protection are authorized.
If the buildings of foreign missions are marked with identification markings, they will be spared attack. The residential houses of nationals of countries not participating in the war are not included under this heading, since, in contrast with the buildings of the missions, they do not have extraterritorial status.


ATTACKS AGAINST TOWNS AND VILLAGES IN THE ZONES OF OPERATIONS OF THE GROUND FORCES

In the case of Army requests for air strikes against towns or villages the decision as to "whether military forces or installations of such importance are situated there, that they justify the attack..." will be a responsibility of the locally responsible army commander.

F. THE USE OF ARMED FORCES AGAINST CIVILIAN AIR VEHICLES

Reference: Rule 27, Item 1.

BEHAVIOR TOWARDS ENEMY CIVILIAN AIR VEHICLES OVER GERMAN TERRITORIES OR OVER TERRITORIES OCCUPIED BY GERMAN FORCES

Enemy civilian air vehicles encountered over German territory or over territories occupied by German forces will be destroyed, since the strong suspicion exists that they will be participating in the conduct of warfare.
Item 2

AIR TRAFFIC WITH NEUTRAL COUNTRIES AFTER THE OUTBREAK OF HOSTILITIES

The possibility exists that air traffic between neutral countries (for example the Scandinavian states) and certain parts of Germany might be reestablished subject to certain special conditions (such as specified operating altitudes, routes, and stopovers). The establishment of such air traffic will be made known by the Commander in Chief of the Air Force.

Reference: Rule 25, Item 2.

AIR WARNING AREAS OVER ENEMY TERRITORIES OR TERRITORIES OCCUPIED BY ENEMY FORCES

Practical experience in the operations in the Sudetenland, Bohemia, Moravia, and Memel show that it is impossible to forego such air warning areas. Our own air forces must be as precisely as possibly informed on current conditions in the air over the enemy.

Reference: Rule 25, Item 2.

AIR WARNING AREAS OVER ENEMY TERRITORIES OR TERRITORIES OCCUPIED BY ENEMY FORCES

Remark: Since the subject of air warning areas over the high seas is subject to completely different circumstances under International Law, because of the principle of
Freedom of the Seas, no conditions concerning this subject have been included in the Rules. Behavior towards civilian aircraft encountered over the high seas will be governed exclusively by Rule 30. If the necessity for air warning areas over the high seas should arise, the matter will be clarified by the political authorities.

References: Rules 29 and 30.

ACTS OF AIR WARFARE SUPPORTING THE ENEMY

Acts of air warfare in support of the enemy are as follows:

Air attack

Reconnaissance activities, including weather reconnaissance

The maintenance of contact.

Intent to Attack.

The intention to attack ships exists when the course and operating altitude of the suspect aircraft allows the assumption that it is preparing at a great altitude for a high-level of dive-bombing attack, or is preparing at an altitude just above the surface for an air torpedo attack.


THE TRANSPORTATION OF TROOPS BY ENEMY OR NEUTRAL CIVILIAN AIR VEHICLES
enemy or neutral
While an/air vehicle is airborne it is not possible by
external evidence to ascertain whether it is transporting
elements of the enemy military forces. Here, one has to
depend on the radio intercept service or on reports from
reliable agents. Only if such reports are available will
action be taken against such aircraft.

Reference: Rule 72, Item 3.

The Intent to Carry out Reconnaissance or Contact
Activities
That suspect aircraft intend to carry out reconnaissance
or contact missions can be considered established if, out-
side of the customary air traffic routes, they follow the
same course at varying distances for a considerable time as
our own naval or land-based air forces are flying, or if
one and the same suspect aircraft is sighted repeatedly at
brief intervals (even if in varying directions).

Reference: Rule 72, Item 4.

CONVOY ESCORT BY AIRCRAFT

The condition of escort by aircraft exists when the
aircraft to be escorted have the military air vehicles dis-
patched to protect them in sight, or if it is evident from
the behavior of the military air vehicles that they operatin
to protect the convoy. Air convoys escorted by enemy air
vehicles and consisting of enemy and neutral or exclusively of neutral civilian aircraft are to be attacked.

Appendix 3-26
Air convoys escorted by neutral military air vehicles and consisting of neutral civilian air vehicles will not be attacked.

Reference: Rule 22, Item 5.

SIGNAL COMMUNICATIONS WITH ENEMY OR NEUTRAL AIR VEHICLES WHILE AIRBORNE

The possibilities are small at present to establish radio or wireless contact with a strange aircraft while airborne. The item is included nevertheless as a precaution against possible future developments in the field of signal communications technology.

G. THE USE OF ARMED FORCES AGAINST MERCHANT SHIPS

RECOGNITION OF TROOP TRANSPORT SHIPS

Troop transport ships when carrying troops are identifiable externally by the numerous soldiers in evidence on the decks and if the ship is not marked with the insignia of a hospital ship (painted white-green, with the Red Cross on its sides).


CONVOY ESCORT BY NAVAL SHIPS
The condition of convoy escort by naval ships exists if the merchant ships under escort are within sight of the ships of war committed to protect them, and if it is evident from the behavior of the ships of war that they are operating to protect the convoy.

Whether it consists of enemy or neutral merchant ships, a convoy under escort by neutral ships of war will be attacked (sic), and a convoy consisting of neutral ships will not be attacked.
The basic target data sheet intended for inclusion here is not available at writing.
## London as a Center of Armament Industries

<table>
<thead>
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<td></td>
<td>Aircraft factories</td>
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<tr>
<td></td>
<td>Aircraft accessories</td>
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<td>Railroad installations</td>
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<tr>
<td></td>
<td>Warehouses</td>
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<tr>
<td></td>
<td>Iron industries</td>
</tr>
<tr>
<td></td>
<td>Measuring instruments</td>
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<tr>
<td></td>
<td>Armament industries</td>
</tr>
<tr>
<td></td>
<td>Ammunition factories</td>
</tr>
<tr>
<td></td>
<td>Explosives depots</td>
</tr>
<tr>
<td></td>
<td>Shipbuilding yards, docks, etc.</td>
</tr>
<tr>
<td></td>
<td>Optical industries</td>
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Map of Poland  
Scale 1:1,000,000

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<th>Transportation Routes</th>
<th>Interdiction Targets</th>
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<tr>
<td>Multi-track Railroads</td>
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<tr>
<td>Single-track railroads</td>
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<tr>
<td>River</td>
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<td>Port</td>
<td></td>
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<tr>
<td>Shunting yards</td>
<td></td>
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<td>Rail depots (switch installations)</td>
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</tr>
<tr>
<td>Tunnel</td>
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<td></td>
</tr>
<tr>
<td>Dam, embankment, ditch</td>
<td></td>
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</tr>
<tr>
<td>Bridge, viaduct</td>
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</tr>
<tr>
<td>Steep grade</td>
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</tr>
<tr>
<td>Narrow road</td>
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<tr>
<td>Siding</td>
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</tr>
<tr>
<td>Dam (Valley)</td>
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<td>Weir</td>
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</tr>
<tr>
<td>Lock</td>
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</tr>
<tr>
<td>Canal basin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timber</td>
<td>Jetty, quay</td>
<td></td>
</tr>
<tr>
<td>Stone</td>
<td>Swamp</td>
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Limited Air Reconnaissance

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<thead>
<tr>
<th>Town</th>
<th>Population</th>
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<tbody>
<tr>
<td>LUELIN</td>
<td>Population exceeds 100,000</td>
</tr>
<tr>
<td>Thorn</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>less than 10,000</td>
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Forest area
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<th>Heavy Industries</th>
<th>Symbol</th>
<th>Mine</th>
<th>Symbol</th>
<th>Mine</th>
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<td>Fuel Production</td>
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<td>Aluminium</td>
<td>Aircraft</td>
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<tr>
<td>Blast Furnaces</td>
<td></td>
<td></td>
<td>Lead</td>
<td>Engines</td>
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<td>Foundry</td>
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<td>Lignite</td>
<td>Fuselages</td>
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<td></td>
<td></td>
<td></td>
<td>Iron, Steel</td>
<td>Aircraft weapons</td>
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<td></td>
<td></td>
<td>Potash</td>
<td>Other weapons</td>
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<td></td>
<td>Coal</td>
<td>Ammunition</td>
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<td></td>
<td></td>
<td>Copper</td>
<td>Gunpowder and other explosives</td>
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<td></td>
<td>Chemicals</td>
</tr>
<tr>
<td>Cokery</td>
<td></td>
<td></td>
<td>Machinery</td>
<td>Optical and other instruments etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Petroleum</td>
<td>Vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mercury</td>
<td>Ship building yards, docks, etc.</td>
</tr>
<tr>
<td>Metal works</td>
<td></td>
<td></td>
<td>Salt</td>
<td>Miscellaneans:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roller mills</td>
<td>Rubber,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Zino</td>
<td>Leather,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Textiles</td>
</tr>
<tr>
<td>Industrial region</td>
<td></td>
<td></td>
<td></td>
<td>Other Targets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Permanent air ports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Barracks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Radio broadcasting station</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Fortified area</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Field type fortifications</td>
</tr>
</tbody>
</table>
Layout of Blast Furnace Installations
Layout of a Cement Factory, as a Target of Military Importance
MINERAL OIL PROCESSING IN THE LINGEN REFINERY

Verdampferkolonne  Evaporator tower
Rohöl  Crude oil
Rohrofen  Tubular oven
Verkokungsofen  Cokeing column or furnace
Krackturm  Cracking tower
Rauchgasabzug  Smoke-gas escape
Liftrohr  Elevating pipeline
Katalysator  Catalyzer
Reaktor  Reactor
Regenerierung des Katalysators  Regeneration of catalyst
Kühlung  Cooling System
Regenerierung  Regeneration
Rauchgas zum Heben des Katalysators  Smoke-gas to elevate catalyst
Petrolkoks  Petroleum coke
Schornstein  MAKXIAK Smoke stack
Raktionierung  Reaction
Geldampfe  Oil vapor
Heizöl  Heating oil
Kolonne 2  Column 2
Kolonne 3  Column 3
<table>
<thead>
<tr>
<th>German Word</th>
<th>English Translation</th>
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</thead>
<tbody>
<tr>
<td>Benzin Raffination</td>
<td>Gasoline refining</td>
</tr>
<tr>
<td>Fluessiggas und</td>
<td>Liquified gas and polymerization plant</td>
</tr>
<tr>
<td>Polymerbenzin Anlage</td>
<td></td>
</tr>
<tr>
<td>Dieselolraffinierie</td>
<td>Diesel oil refinery</td>
</tr>
<tr>
<td>Misch- und Verbeilungs-</td>
<td>Mixing and octane processing plant</td>
</tr>
<tr>
<td>anlage</td>
<td></td>
</tr>
<tr>
<td>Fertigprodukt</td>
<td>Finished product</td>
</tr>
<tr>
<td>Heizgas fuer den Betrieb</td>
<td>Heating gas for own use</td>
</tr>
<tr>
<td>Polybenzin</td>
<td>Poly-gasoline</td>
</tr>
<tr>
<td>Crackbenzin</td>
<td>Cracked gasoline</td>
</tr>
<tr>
<td>Fahrbenzin</td>
<td>Motor gasoline</td>
</tr>
<tr>
<td>Propan</td>
<td>Propane</td>
</tr>
<tr>
<td>Butan</td>
<td>Butane</td>
</tr>
<tr>
<td>Fluessiggas</td>
<td>Liquified gas</td>
</tr>
<tr>
<td>Dieselkraftstoff</td>
<td>Diesel fuel oil</td>
</tr>
<tr>
<td>Verdampfer</td>
<td>Vaporizer</td>
</tr>
<tr>
<td>Heizsel</td>
<td>Heating oil</td>
</tr>
<tr>
<td>Fursurol</td>
<td></td>
</tr>
<tr>
<td>Dieseloldestillat</td>
<td>Destillated diesel oil</td>
</tr>
</tbody>
</table>

The technical drawing of the factory layout with the explanations given does not correspond in details to the photographic overall view of the factory used.
1940

French Airfield after an Attack
Russia

A Complete Air Unit Destroyed on the Ground
1940

Result of a Bombing Attack to Put Take-off and
Landing Area of a French Airfield out of Operation
Photo

Destroyed Air Force Supply Depot
at Nanterre
Photo

The Citroen Factory, Paris
Air Photo

No Caption. No Text.
IV Air Corps

US four-engine bombers destroyed on ground at Russian Airfield Poltava by German bombers.

Units participating in German attack:

4th Bomber Wing as Pathfinders and Target Markers
53d Bomber Wing
55th Bomber Wing.
AIR FORCE DISPOSITION IN SOUTHERN UK.
ARMY SUPPORT OPERATIONS OVER THE FIELD
OF BATTLE

CHAIRNS OF COMMAND AND COMMAND CHANNELS
(Outbreak of War to 1942)

Supreme Military Command
(Oberkommando der Wehrmacht)

<table>
<thead>
<tr>
<th>CINC, Air Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Later Air Force High Command)</td>
</tr>
</tbody>
</table>

| In conference |

Directives to air fleets for conduct of operations

<table>
<thead>
<tr>
<th>Air Fleets</th>
</tr>
</thead>
</table>

| 1 |

<table>
<thead>
<tr>
<th>Army High Command</th>
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<tbody>
<tr>
<td>Attached Air Force General</td>
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<table>
<thead>
<tr>
<th>Army Groups</th>
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<tr>
<td>Air Support Command</td>
</tr>
</tbody>
</table>

| 2 |

<table>
<thead>
<tr>
<th>Armies</th>
</tr>
</thead>
</table>

| CO, Tactical Command |

Legend:

--- | Orders

--- | Conferences and requests

1. Tele- and radio communications, liaison planes, motor vehicles
AIR SUPPORT OPERATIONS FOR THE ARMY ON THE FIELD OF BATTLE
CHAIN OF COMMAND AND COMMAND CHANNELS
1941-1942

1. Issued directives to air fleets for conduct of air operations
2. Allocated forces and assigned missions to air or antiaircraft artillery corps or divisions. Contact maintained (see Footnote 3, below).
3. Contact maintained by teletype, telephone, radio, aircraft, and surface motor vehicles
4. If no tactical support headquarters, the air corps or air division issued orders directly to the tactical units.
5. Army forces not currently being supported by air units channeled their requests for air support through AF channels to their superior army headquarters.

--------- Required to cooperate

Directives and orders
EXAMPLE OF AIR SUPPORT FOR ARMY OPERATIONS

Situation. Agreement between Army Group A and First Air Fleet is that main emphasis in air support will be in south flank area of Fourth Army.

Fourth Army has requested II Air Corps to support III Panzer Corps; III Panzer attacked at daybreak.

Its 5th Panzer Division has made good progress on the right, but its 5th Panzer Division, on the left, has been halted by heavy antitank gunfire.

0810 5th Panzer Division through its attached Air Signal Liaison Detachment requests from II Air Corps a strike against antitank gun positions north of (15)

The request could be made by radio or telephone.

Air Signal Liaison Detachment at III Panzer Corps monitors request message.

0820 Warning order by II Air Corps to 44th Ground Attack Group and 22d Fighter Group: "Strike against heavy antitank gun positions north of (15) at approximately 1000 hours."

0830 II Air Corps order to 44th Ground Attack Group and 22d Fighter Group:

"Attack by 5th Panzer Division halted immediately north of (15) by fire from heavy antitank guns.

"44th Ground Attack Group will attack antitank..."
0830--Cont.
gun positions. Attacking units to be over target at 1015 hours.

22d Fighter Group will provide escort protection and will then neutralize enemy air forces over III Panzer Corps zone.

5th Panzer Division will renew attack in direction of (16) at 1030 hours. From 1010 on colored marking ammunition will be placed on target.

Appendix 21--2

Ground-attack directing team will take over 44th Ground Attack Group during approach route.

0850

II Air Corps to 5th Panzer Division, through Air

Dulmen Detachment [III Panzer Corps monitoring message]:

"Ground attack units attacking north of (15)
at 1015 hours."

0900

Air Dulmen Detachment, 5th Panzer Division, to

Ground-Attack Directing Team:

Message giving situation, plans, time the air units will attack.

0945

Attacking air units leave ground.

0955

Ground attack directing team takes over direction of air units.

1010

Artillery commences firing marking shells.
1015  Air units attack antitank gun positions north of (15).
1020  5th Panzer Division jumps off to attack in direction of (16).
ANNEX TO 1ST PANZER DIVISION ORDER, 13 MAY 1940, 2000 HOURS, FOR ATTACK ACROSS THE MEUSE RIVER ON 13 MAY 1940

COMBINED ARMY AND AIR FORCE FIRE PLAN

1st Panzer Division

<table>
<thead>
<tr>
<th>Action Phase</th>
<th>Time under Alert</th>
<th>Infantry</th>
<th>POINT FIRE WEAPONS</th>
<th>Artillery</th>
<th>Air Force</th>
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</thead>
<tbody>
<tr>
<td>Preparations 0800</td>
<td>Attack to cross to Meuse River 1500</td>
<td>Attack targets in K</td>
<td>a. Support advance through schedule</td>
<td>See time schedule</td>
<td>II Tactical Support Group</td>
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<tr>
<td></td>
<td></td>
<td>Bunkers &amp; strongpoints at Meuse River in Target Area H, I, J, N, O.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Meuse River</td>
<td>b. Fire lanes at Meuse</td>
<td>a. Harass bombing on localities in Target Area H, I, J, N, O.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Claire &amp; Torcy</td>
<td>c. Fire on bunkers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d. AAA &amp; other</td>
<td>Attack arty fire in arty firing positions</td>
<td></td>
</tr>
<tr>
<td>Preparations 1500</td>
<td>as to cross to above Meuse River 1550</td>
<td>Attack bunkers at Meuse River</td>
<td>a. Adjustment fire at crossing points</td>
<td>b. Attack targets in Target Area K, L.</td>
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<td>b. Attack targets in Target Area K, L.</td>
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<td></td>
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<td></td>
<td>c. AAA and other artillery fire</td>
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<tr>
<td>Action Phase</td>
<td>Time under Alert</td>
<td>Infantry Point Fire Weapons</td>
<td>Artillery</td>
<td>Air Force</td>
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<tr>
<td>Shortly before river crossing operation</td>
<td>1500</td>
<td>Concentrated fire at crossing points</td>
<td>Fire concentrations on crossing points</td>
<td>See time schedule Tactical Support Group harass bombing, destroy Claire and Torcy</td>
<td></td>
</tr>
</tbody>
</table>

| Jumpoff and penetration | From Support fire on | Attack bunkers before and after troops cross River | Fire support for infantry in division attack zone | See time schedule |

**Remark:** Smoke Projector Battalion place smoke screen on Claire-Torcy road from 1600-1630, on Bellevue-Torcy road from 1730-1830 hours.
Near Montmort Bois du Brie

Results of a strike by German ground-attack air units
A March Route under Bombing Attack
Photo

Vyazma- less data available

Appendix 26

Photo

1942

Direct Hit on Ammunition Depot
Stalingrad
Russian Tanks under Air Attack

Russia
Results of an Air Attack on a Road to the Front.
Air Attacks against Field and Battery Positions in Northern Dan River Bend Area

Bunker Damaged by Near Hit
Photo

Hit by a 550-pound (250-kilogram) bomb
AIR SUPPORT OF ARMY OPERATIONS IN THE 1940 CAMPAIGN IN FRANCE

Fighter Forces open the way for the armored forces on the ground.

Bomber Forces protect the flank of the armored forces.

Fighter Forces provide cover against enemy air attack.

Legend.
Situation approximately on 19 May 1940

\[\text{German \hspace{1cm} \text{Allied}}\]

\[\text{German \hspace{1cm} \text{Allied}}\]

6. Army designation number (Sixth Army)

E. English

\[\text{Belgian forces at time of capitulation on 27 May 1940}\]

Nord See \hspace{1cm} North Sea

Der Kanal \hspace{1cm} English Channel

Pz. Kps. Reinhardt \hspace{1cm} Panzer Corps Reinhardt

Pz. Kps. Guderian \hspace{1cm} Panzer Corps Guderian

Geeresgruppe 3 \hspace{1cm} Third Army Group

Dünkirchen \hspace{1cm} Dunkirk
Air Force Operations Staff 9 November 1943

Command Personnel Only

Enclosure. "Brief Study: Warfare against the Russian Armament Industry."

Attached is a brief study "Warfare against the Russian Armament Industry" ("Kurze Studie: Kampf gegen die russische Waffensindustrie").

1. In the Eastern campaign (Russian campaign) German air power was properly and logically employed up to the time when the Insep line was reached in the autumn of 1941. The rapid advance was made possible only by destruction of the Russian air forces and direct air support for the Army.

From that point on, however, at least elements of the Air Force should have been committed as follows:

a. Against rail routes far in the Russian interior in order to prevent the movement of forces from the far rear to the front, and above all to prevent the evacuation of the extensive armament industry, or at least hamper that movement, to the interior.

b. Against Russian armament factories still operating within striking range.
Continuation of the operations on the ground however made it impossible for the time being to divert air forces for the execution of such missions. However, after the front had stabilized to repel the commencing Russian winter offensive, all available air forces still had to be committed in direct support of the Army on the field of battle. Even the bombing of Leningrad and Moscow time and again had to take second place to the urgent requests of the Army. And this was all at a time when the Russians were clearly inferior in the air and had only weak ground defenses against air attack.

2. With the opening of our summer offensive in 1942 the Air Force was again committed with all of its forces in missions of direct support for the Army, and so it has remained right up to the present.

In spite of all this, the Air Force whenever it had attack forces temporarily available directed destructive attacks against the enemy armament industry, for example against Moscow and Tikvin in the winter of 1941-42, and, besides numerous continuous attacks against Leningrad, against Voronzh, Saratov, and Grozny in the summer of 1943. The results achieved in these attacks were at all times great.

3. In the meanwhile, however, the Russian air
forces, and particularly the Russian fighter arm, have again increased in strength, while our own air power in the east has not increased in point of numerical strengths of modernization. At present one can even speak of Russian numerical superiority in the air.

Furthermore, the withdrawals which have become necessary on the ground have moved our air bases farther and farther from the large targets of the Russian armament industry, some of which are already beyond the range of our aircraft models presently in service.

4. Thus it must be stated that we have missed the most opportune time, as such, and that the difficulties have become very great in the meantime. In addition, our air forces in the east are tied down even more severely than ever before.

In the meanwhile, the Russian armament industry, measured by Russian strengths in matériel at the front, has shown steadily increasing capacities. If the Russian armament industry is able to continue operating without interference, as in the past, it is to be expected that during the winter months and in the coming year it will produce aircraft, tanks, guns, etc., in such large numbers that the question must be faced seriously whether our forces on line will be able to defend their positions...
against the Russian masses armed with this material.

Can the German Air Force not make a bigger contribution towards victory by attacking the very source of Russia's striking power—the armament industry—to the extent that this is still possible, instead of serving as artillery and placing its bombs immediately ahead of the infantry?

5. The Russian air forces are admittedly already very strong in fighters, which means that their defenses in the far rear have probably been improved and that attacks against industrial targets have become more difficult. Many/important targets today are beyond our striking range. On the other hand, possibilities still exist for the German Air Force with its presently available means to strike and paralyze important parts of the Russian armament industry. The possibilities for point target bombing have improved with the introduction of new weapons, so that good results can be achieved nowadays even with relatively small forces.

The only basic condition is that this weapon [the bomber arm] be at least temporarily relieved of its mission of direct support in the eastern theater, and of other missions.

With the new aircraft types (He-177, Ju-290, etc),
presently being placed in service, even bigger successes could be achieved, particularly far inside the Russian interior, the only important requirement being that these new types are delivered soon and in adequate numbers.

7. The compilation of the brief study is motivated by the conviction that a neutralization of as large parts as possible of the Russian armament industry would be of greater importance for the fighting front in the east, and in certain circumstances even for the outcome of the entire war, than the present use of air power in missions of direct support for the ground forces.

The presently available target data in the Intelligence Division of the Air Force Operations Staff have been examined and revised by Professor Steinmann of the Air Service (LD) Office, and by President Dr. Karl of the Reich Ministry for Armament and Wartime Production, so that the present target appreciation arrived at can claim a high degree of reliability and validity. Besides the attached appendixes, true-to-scale air photos, which have been specially processed, and individual models are available.

8. The brief study has proved that neutralization of Russian armament industries, at least in the large
industrial regions of Moscow and the Upper Volga River, is possible with relatively small forces and with the types of aircraft and weapons presently available.

It would be essential, however, to concentrate these forces in special units and prepare them for their mission. When this would be possible under present conditions, the present author cannot judge; this point must be decided at a higher level of command.

It is my opinion that we should accept the risk of compromising our latest weapons (the RF here the author is referring to an air-to-surface radio or wire controlled glide bomb) if all other conditions for execution of the mission exist.

I recommend that the blow against the Russian armament industries be approved in the form suggested in the study, and that a basic approval be obtained from the Fuehrer to withdraw the bomber units from action in the eastern theater.

In the priority schedule to be compiled for operational missions of the Air Force, combat action against the Russian armament industries in the Moscow-Upper Volga River region under any circumstances should be given first place.

In this connection attention is once again drawn
to the fact that the Operations Division, Army General Staff, Army High Command in its letter # 10038/43, Top Secret, also states as follows:

"One reason for the Russian successes is their increased firepower and flexibility, due to the equipment of their forces with large numbers of mechanical weapons, artillery guns, tanks, and motor vehicles, which has been made possible by a high-capacity armament industry, and remains possible. In the impending battles, properly planned and intensive combat action against the armament industries therefore could materially relieve the strain at the front caused by the material weight of the Red Army."

Distribution:

Adjutant's Office, Reich Air Ministry for the Reich Marshal Chief of Air Force General Staff--Chief, Air Force Operations Staff Operations Division, Air Force Operations Staff Operations Division (Air Operations Section) Air Force Operations Staff. Serves simultaneously to inform the Intelligence Division and the Chief Signal Officer.

War Journal

Reserve supply for later distribution to authorized headquarters.
Air Photo

No Caption. No Text.

Air Photo

No Caption. No Text.
AIR FORCE-NAVY COOPERATION IN THE WESTERN THEATER
From September 1939 on

CHAIN OF COMMAND AND COMMAND CHANNELS

Legend:
- = Tactically assigned
- = Required to cooperate
- = Administratively assigned.

CINC Navy

AF General w/CINC Navy Gen. Ritter

Naval Opns Staff

(AF General w/CINC Navy Gen. Ritter)

Naval Opns Staff

Second Air Fleet
(Muenster)

10th Air Div
(Hamburg)
Gen Geissler

Tac Units
(Sep 39)
2d Gp (He-111)
of 26th Bomb Wing; 1st Gp,
(Ju-88) of 25th Bomb Wing

Air Cmd West
(Jever)
Gen, McCollum

106th, 306th, 406th Coastal
Groups; Carrier-Based
Group, totalling 11 squadrons

Legend:
- = Tactically assigned
- = Required to cooperate
- = Administratively assigned.
North Sea and Helligoland Bight

Legend:
Nord See  North Sea
Deutsche Bucht  Bight of Helligoland
Lueftlich  Liege
Frankreich  France

Shaded areas of Helligoland Bight, bordered by 5°30' longitude east and 55°30' latitude north, was the area in which air combat action against ships was authorized by Directive #4, 23 September 1939.
Outside Kronshtadt
Battleship Marat under Dive-Bomber Attack

Kronshtadt, September 1941
Armored Cruiser October Revolution under Attack
Port by German Ju-87 Dive-Bombers.
Near Odessa
Ship sunk by Dive-Bombers

Gulf of Finland
Sinking of a Troop Transporter
Photo

Sevastopol
Naval Ships and Troop Transporters Sunk

Photo

The Port of Tuapse under Attack by
Ju-88 Dive-Bombers
A Polish Destroyer in the Drained Basin of the Port of Dunkirk. Showing Damage Done by Attacking Bombers.

Bomb Hits on an American Ammunition Ship at Sicily.
EXAMPLE OF ATTACKS AGAINST A RAIL DEPOT

Legend.
Stellwerk           Switch Tower
Güterhalle         Warehouse
Rangier- u. Abstellgleise  Marshalling and siding tracks
Bahnhofts Gebäude  Railroad Station
Lok Schuppen       Locomotive Shed
Versorgungs-Anlagen  Servicing Installations
Wasserturm         Water Tower
Werk-Halle         Repair Shop.
PROFITABLE TARGETS FOR ATTACKS AGAINST
TRANSPORTATION MOVEMENTS IN FRANCE
(See attached Sketch)

Excerpt from Order C3, Second Air Fleet and CINC North, #
7220/39, Top Secret, Command Personnel Only, 8 November 1939.

A. Railroads. (Map 1:1 000 000)

Profitable targets for rail interdiction action have
been grouped in two zones, a western, and an eastern zone
(See Outline Map in Appendix 2).

In the western zone the following are some of the
profitable points for rail interdiction attacks:

1. Between Hazebrouck and Armentières
2. East of Merville
3. Between Bethune and Fouquereuil
4. Target Halloy # 4266 northeast of Dullens at
   Mondicourt
5. Rail Depot St. Pol
6. Target Authuille # 4269, north of Albert at Miraumont
7. Bridge Maroosing Target # 4256, 6 miles southwest
   of Cambrai.

In the eastern zone:

8. Middle of the Bruegge-Gent section
9. South of Torhout
10. Crossails at exit from Coutrai
11. Wervicq 3 miles southwest of Menin
12. Middle of the Hersaux-Avelghem section east of
    Lottignies
13. West of Tournai before tracks to Lille and Coutrai
    cross
14. Middle of Leuze-4th section
15. Between Valenciennes and Mons at Quiévrau.

Attached to Appendix is an outline map: Overlay A to Appendix 2. This refers to the original order from which the above is an excerpt.
Photo

Bomb Hit on an Armored Railway Train
Roncoinay, roughly seven miles south of Troye, France
showing rail installations destroyed in an
attack by the 77th Dive-Bomber Wing (Ju-87) using 550-pound
bombs.

Ammunition destroyed at the Pavlovgrad
Rail Depot, Russia.
Bomb Hits on a Rail Depot in the East, 1942
RAILROAD INTERDICTION
DURING OPERATIONS TO SEAL OFF THE BATTLEFIELD OF KIEV
1-25 September 1941

Map

Legend:
Pz. Gr. 1    First Panzer Group
Pz. Gr. 2    Second Panzer Group
2. (17.) Arme   Second (Seventeenth) Army

Attacks by units of the V Air Corp (Fourth Air Fleet), and
II Air Corps (Second Air Fleet) against:
- Rail depots, sheds, and trains in depots
- Points for special attack
- Railway trains and locomotives between depots (Railcars destroyed and escaping troops attacked)
- Floating targets (naval vessels)
- Railroad bridges
- Railroad, open way
- Date of attack

------- Boundary between II Air Corps (above line) and V Air Corps (below line).
TYPICAL TARGET-EFFECT PHOTOS TAKEN AFTER
ATTACKS AGAINST LARGE RAIL DEPOTS

Appendix consists of two photos without caption or text.
PANAMA CANAL

Showing Pacific and Atlantic Oceans, Gatun Lake with weir, and the trace of the first canal attempted by France.
Bomb-Stricken Volga River Ships

Bridge across Bzura River, Poland, Destroyed in Dive-Bombing Attack
Bridge at Novgorod under Dive-Bomber Attack

Vyazma Bridgehead Pocket after an Attack by Dive-Bombers, 1941. In a previous attack the same Dive-Bomber Units had destroyed the Bridges.
A Bridge under Attack by Bombers
PROFITABLE TARGETS FOR ATTACKS TO INTERDICT TROOP MOVEMENTS ON ROADS IN FRANCE
(See attached outline map)

From Order by Commanding General, Second Air Fleet and Commander in Chief North, # 7220/39, Top Secret, Command Personnel only, 8 November 1939.

B. Roads (Map 1:500 000), see Overlay B, Annex 2.

If possible, attacks against transportation movements on roads will be directed at the following profitable interdiction points. Roads and rail routes will be considered as primary targets for tactical reconnaissance.

Roads

1. Dunkirk-Bailleul-Lille section
   a. Rail and road bridge over canal northwest of Bergues exit

2. Calais, St. Omer, Bethune, Lille
   a. Rail-road-river intersection north of Arques 6 miles southeast of Calais
   b. Rail-road-river intersection La Bassee

Interdiction Points

1a. Dunkirk-Ypres-Menin-Ouverlu-Audenarde-Ninove-Brussels section
   b. Road intersection at Cassel, 15 miles south of Dunkirk
   c. Bridge west of Ypres Road intersection Avelghem and Nederbrarel


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Road

2. --Continued

3. Boulogne, St. Omer

4. St. Piere, Arras, Cambrai

5. Abbeville, Doullens

6. Amiens, Cambrai, Valenciennes, Mons, Brussels

7. Valenciennes, Gent

8. Ghislenghien, Gent

9. Ostende, Thorout

Interdiction Points

b. Continued:

Road intersection Coomsbert, 10.5 miles east of Boulogne

b. Rail and road bridge Poelbecourt, southeast of St. Pol

c. Road bridge across river 6 miles northwest of Cambrai

a. Road intersection 1½ miles northeast of Doullens

b. Road bridge over Sourpe 3 300 yards northeast of Douai

c. Braine-le-Comte 18 miles southeast of Brussels

a. Road bridge northeast exit from Perwez

b. Audenarde

As Lassines, narrow-gauge rail-road-river intersection

a. Lichtervelde

b. Road intersection Thiet

Gent
<table>
<thead>
<tr>
<th>Road</th>
<th>Interception Points</th>
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<tbody>
<tr>
<td>2.---Continued</td>
<td>b. Continued:</td>
</tr>
<tr>
<td>3. Boulogne, St. Omer</td>
<td>Road intersection Colombert, 10.5 miles east of</td>
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<tr>
<td></td>
<td>Boulogne</td>
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<tr>
<td>4. Etaples, Arras, Cambrai</td>
<td>a. Rail and road bridge Mare-</td>
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<tr>
<td></td>
<td>quiel 15 miles southeast of Etaples</td>
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<td>b. Rail and road bridge Roelle-</td>
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<td></td>
<td>court, southeast of St. Pol</td>
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<td></td>
<td>c. Road bridge across river</td>
</tr>
<tr>
<td></td>
<td>6 miles northwest of Cambrai</td>
</tr>
<tr>
<td>5. Abbeville, Doullens, Arras,</td>
<td>a. Road intersection 19 miles</td>
</tr>
<tr>
<td>Douai, Lille</td>
<td>northwest of Doullens</td>
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<td></td>
<td>b. Road bridge over Scarpe</td>
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<tr>
<td></td>
<td>3 300 yards northeast of Douai</td>
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<tr>
<td>6. Amiens, Cambrai, Valenciennes</td>
<td>a. Road intersection Baupaume</td>
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<td></td>
<td>Mon, Brussels</td>
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<td></td>
<td>b. Road bridge 1100 yards east of Denain</td>
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<td>c. Braine le comte 12 miles</td>
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<td>southeast of Brussels</td>
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<tr>
<td>7. Valenciennes, Gent</td>
<td>a. Road bridge northeast exit from Peruwelz</td>
</tr>
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<td></td>
<td>b. Audenarde</td>
</tr>
<tr>
<td>8. Ghislenghien, Gent</td>
<td>#2 lessines, narrow-gauge rail-</td>
</tr>
<tr>
<td></td>
<td>road-river intersection</td>
</tr>
<tr>
<td>9. Ostende, Thorout, Lichtenwede,</td>
<td>a. Lichtervelde</td>
</tr>
<tr>
<td>Thielte, Gent</td>
<td>b. Road intersection Thielte</td>
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</tbody>
</table>
Road

10. Lille, Gent

11. Brugge, Gent

Lille-Tournai-Leuze-Ath-Enghien-Hal

Intermission Points

a. Road intersection 7½ miles north-east of Courtrai

b. Road intersection Cruyshautem

Road bridge across river 12 miles east of Brugge east of Maldegem

Road intersection Chielangehen

Road intersection Orchies.
LARGE-SCALE ATTACKS AGAINST PORTS AND
INDUSTRIAL INSTALLATIONS IN ENGLAND
September 1940

Outline Map

Legend
Ost-England       East
Mittel-England    Middle
Sued-England      South
Sued-WestEngland  Southwest
Nordsee           North Sea
Map Scale 1:6,000,000
Der Kanal
Frankreich

English Channel
France
LARGE-SCALE ATTACKS AGAINST PORTS AND INDUSTRIAL INSTALLATIONS IN ENGLAND
October 1940

Outline Map
Scale 1:6 000 000

Legend.
160 km westl. Ireland
Empress of Britain

SS Empress of Britain attacked 160 kilometers west of Ireland

Also see legend Appendix 62.
LARGE-SCALE ATTACKS AGAINST FORTS AND
INDUSTRIAL INSTALLATIONS IN ENGLAND
November 1940

Outline Map
Scale 1:6 000 000

Legend
See Appendix 62
In Astrakhan
Oil Bulk Storage Tanks Set on Fire by Bombing Attack
Target Effect Photo

Film 305 SE/143
Photo C07
1st (Strategic) Squadron
100th Reconnaissance Group

MOTOR VEHICLE FACTORY # 1
"MOLOTOY"
Gorkij-Avtozavod

After night attack 7-8 June 1943,
Time of attack: 2140-2355 hours
Time of photo: 1545 hours, 8 June 1943.
Units participating in attack: 3rd Group, 1st Bomber Wing;
2nd Group, 4th Bomber Wing; 2nd Group 51st Bomber Wing.

Legend.
0 Bomb hits on buildings
1 Bomb in terrain
2 New hits in assembly plant
3 " " turning and milling shop
4 " " foundry
5 " " carpenter shop
6 " " Forge shop
7 " " tank assembly plant
8 " " engine construction plant
9 " " tank assembly plant
10 " " tank proving station
11 " " mechanics department
12 " " outbuildings.
Oil Farm on Fire in Lower Thames River, London
Following German Bombing Attack on 9 September 1940

The following passages on this subject are quoted from "The Rise and Fall of the German Air Force," published by the British Air Ministry:

On 5 September.....Later in the day others made up for this mistake by striking the oil farm in Thameshaven. This may have been an alternate target in place of the airfields in the estuary area, but the success achieved encouraged the enemy to repeat the attack on the sixth. Heated by further enemy bombs, giant fires roared throughout the whole night. They were still burning when the heavy attack of 7 September commenced.
THE FAR NORTH THEATER OF OPERATIONS
1942

Legend:

Noerdliches Fismeer  Arctic Ocean
Halbinsel Kola    Kola Peninsula
Weisses Meer     White Sea
Bottnischer Meerbusen   Gulf of Bothnia
20. Geb. Armee    HQ, 20th Mountain Army
XXXVI Geb. K.   XXXVI Mountain Corps
Finn.(III, V, VI, VII) A.K   Finnish (III, V, VI, VII) Corps
Ladoga See    Lake Ladoga
Map Showing Value of Goods Arriving in England by Various Shipping Routes

Legend:
- Dpf [abbreviation for Dampfer] / Steamers
- BRT [abbreviation for Brutto Register Tonne] / Gross Register Tons

Map Showing Routes, Numbers of Ships, and Tonnage of Goods arriving in Britain from Overseas Plus Coastal Routes, Ships, and Tonnages
Scale 1:8 000 000
MAP of WARSZAW (Warsaw)

Targets

Legend:

Flugplatz  Airfield
Eisenbahn und Strassenkreuz  Rail and road intersection
Vorortbahn  Suburban railway
Bahnhof Warschau-Ost  Rail Depot Warsaw East
Motorenfabrik Avico  Motor Factory Avico
Elektr. Werk  Electric Power Station
Schule d. chem. Waffen  Chemical Service School
Sender  Radio transmitter
Bahnhof West  Rail Depot West
Kaserne  Kaserne
Flugzeugwerk  Aircraft factory
Kura  Ammunition Installation
Angriffe am  Attacks on
OVERLAY TO MAP OF SE LONDON AND DARTFORD
(Order I Air Corps, # 10285/40 Top Secret, 6 Sep 40)

Legend:
K.G. 30  30th Bomber Wing
K.G. 1  1st " "
K.G. 76  76th " "
MODLIN AND WARSAW
25-26 September 1939

Legend:
Warschau        Warsaw
Luftflotte 1    First Air Fleet
Luftflotte 4    Fourth Air Fleet
Fliegerführer   Special Purposes Air Command
2. D.V.
1939
Warsaw on Fire
THE GERMAN AIR ATTACKS AGAINST WARSAW
IN THE LIGHT OF MILITARY LAW


On any appreciable scale only the civilian population of Warsaw became affected when that city, after annihilation of the Polish armies in the field, was enveloped and was defended.

a. Since 16 September 1939 the Polish Government and military authorities had been called upon by means of leaflets to surrender within twelve hours, and had been informed that otherwise Warsaw, as a defended city would be attacked, the attacks to be directed at its military targets and utility installations, and that then the Government, by reason of its senseless resistance, would itself be responsible for any losses which thereby might be inflicted. At the same time, the population was called upon to leave the areas of road exists (cf. OKW Befehl 16 and 19 September 1939).

Appendix 75-2

After this ultimatum had expired without response, approximately 800 bombers of all types commenced daylight attacks against Government buildings, caserns, military
camps (Lager: could also mean depots); rail depots, signal
communication, and supply installations; aircraft factories
and antiaircraft artillery positions; and airfields. In the
course of several days, these attacks were gradually ex-
tended to include the whole area of the city, the objec-
tive being to speed up its capture.

These were the first large-scale operations against
the installations of a town or city, and at this time al-
ready 2 200-pound (1 000-kilogram) bombs were used against
special targets.

Compared with population figures, civilian losses
were not very high. On the other hand the destruction
was considerable and, primarily because of the complete
interruption of the water and sewage systems, brought
about a quick surrender, so that the civilian population
was spared the suffering of a siege of long duration (Cf.
1946, p. 72).

b. In an appraisal from the viewpoint of military
law, the decisive point is that these air attacks were
carried out in support of the ground operations of the
investing army forces, and in cooperation with those for-
ces, and therefore were subject to the terms of the Hague
Rules of Land Warfare. Consequently, the commitment of
all weapons, and thus also of air forces and artillery,
in terms of Article 25 of the Hague Rules of Land Warfare,
was not prohibited, since Warsaw was a defended city and was
to be captured. On the same basis, for example, no-
thing can be said against the artillery fire directed by
the Poles themselves from 10 September 1939 on against
the western part of Warsaw, which was occupied by German
troops, while the Poles used guns of all calibers from
the eastern part of the city.

Furthermore, including the airdropped leaflets men-
tioned, the German attacks were preceded by demands for
surrender repeated five times, which even fulfills the re-
quirements of Article 26 of the Hague Rules of Land War-
fare, which did not even apply in the case of air attacks.

In the matter of target selection the Hague Rules
of Land Warfare in Article 27 impose only one restriction,
concerning infirmaries, so that it would have been per-
missible to attack practically all the rest of the city
(cf. Pohl: *Luftkriegrecht*, Stuttgart, 1924, p. 22). In
spite of this, the German units in the initial stages
endeavored to concentrate the effects of their weapons
exclusively against the military targets, in a manner from
which the attempt is evident to spare the civilian popu-
lation to the greatest possible degree (cf. Kesselring:...
p. 59. The contrary presentation in Speight: Air Power, pp. 265 and 286, is not adequately established by the reference to the widespread destruction in Warsaw, which were an unavoidable result of the long battles for the beleaguered mistress and were not due to air attacks alone.

It is also likely that the low-altitude attacks he claims, without evidence, were directed at civilians endeavoring to extinguish the fires were in actual fact directed at Polish troops within the city areas or even still engaged in ground combat). As the defense perimeter steadily contracted, this would have been impossible because of the very fact that the center of the city, which was organized in great depth for defense by approximately 100,000 troops, contained military targets in a steadily growing density.

The initial, and vigorously propounded, opinion of Germany's opponents that with these air attacks Germany had violated Military Law, was also later widely disavowed (cf. Fuller; Liddel-Hart; FJF; Advance to Barbarism (German Edition, Hamburg, 1954, p. 145).
THE GERMAN AIR ATTACK AGAINST PARIS IN JUNE 1940
IN THE LIGHT OF MILITARY LAW

Eberhard Spetzler, D.L.: "Der Weg zur Luftentlaucht vor England
in Friedensrechtlicher Betrachtung," in "Völkerrechtliche

Likewise of a strategic nature was the daylight at-
tack carried out by strong forces in June 1940 against
airfields as well as aircraft fuselage and aircraft en-
gine factories in the outskirts of Paris. The purpose
here was to destroy these important military targets in
order to prevent enemy acts of air warfare, but in additio-
obviously to speed up the surrender of Paris and the capi-
tulation of France and thereby bring the whole campaign
to a quick close through the demonstrative impact of a
concentrated attack by strong air forces. This latter
intention, however, can only be justified under the laws
of warfare because it was effectuated as part of an at-
tack which was important for the achievement of victory
and which was justifiable under the laws of warfare even
without such intent and was directed at the military tar-
gets involved.

The attacking German units had strict orders to
avoid bombing the residential districts of Paris no matter
what happened, an order they were able to abide by
to the letter in conditions of good visibility.

The impact thus in full concentration struck the assigned targets, causing only few casualties; Paris itself remained practically untouched, so that in this attack also the laws of warfare were properly respected.
ATTACK AGAINST ROTTERDAM, 13 MAY 1940


Field Marshal Kesselring writes as follows concerning the German air attack against Rotterdam:

**ACT I IN THE WEST**

The first movements proceeded according to plan. I breathed a sigh of relief when the first favorable reports arrived about the capture of the bridges across the Albert Canal, of Fort Eben Emael; and about the jump landings at the Meuse River bridge at Norgyk and at the Rotterdam airfield, which came off as planned; as well as about the capture of the bridge and the airfield.

Very uncertain reports concerning troop landings by Ju-52 aircraft at the coast south of Den Haag; oral report by the wing commander of an air transport wing concerning air landings on the main highway Rotterdam-Haag accompanied by enemy attacks on the ground and from the air, and reports concerning revived fighting all around the Rotterdam airfield involving considerable losses among the continuously landing aircraft; all of them arriving with conflicting contents and in conflicting tones satisfied neither me nor the Commander in Chief.
of the Air Force. Finally, a reconnaissance flight by my officer operations brought in reassuring news of the situation at Rotterdam.

Reports from the landing corps came in very slowly; radio messages only became more frequent when air support of some kind was requested, but remained silent on the situation at the 22d Infantry Division. Air Fleet Headquarters reconnaissance soon established that the operation to seize the Den Haag airfield had not succeeded.

On the morning of 13 May General Student repeatedly requested support in the form of bomber strikes against enemy strongpoints within Rotterdam, with main emphasis at the bridges, where the paratrooper forces had been held up. The time for the attack was to be 1400 hours. This attack was carried out and ultimately led to the capitulation of Holland on 14 May 1940.

Great as this military victory was, just as serious were the accusations levelled by the Dutch against the Reich Marshal and myself, at the end of the war, and repeated again during the trials before the international Military Tribunal at Nuremberg. I state here again that before the bomber wing took off on its mission Goering

* An air-carried infantry division organic to the Army. Not a paratrooper force; paratrooper units were organic to the Air Force. Air-carried infantry were trained and equipped specifically for air transportation. (Note by translator).
Goering and I spent hours in agitated discussion of the question as to how the requested attacks were to be carried out and whether they should be carried out at all;

these hours of discussion caused me to repeatedly remind the wing commander to watch out for the signal lights and identification markings within the zone of operations, and to insure maintenance of constant contact with the radio station of the landing corps and with me. Anxiety developed because no radio contact could be established after the early morning radio message from Student, for which reason Air Fleet Headquarters was no longer informed on the tactical situation within and around Rotterdam. The danger also existed of bombing our own troops. That General Student had already entered into negotiations with the Dutch, or that he himself was seriously wounded and that General der Panzertruppe (Lieutenant General) Schmidt, CG of the panzer corps, had taken over the command was known neither to the Air Fleet headquarters nor to the Army Group Headquarters. For me as an experienced soldier, and artilleryman, and an aviator, it had become an everyday occurrence that signal communications were particularly apt to be disrupted during the most important phases of a battle. This was the reason for my
precautionary reminders to the wing commander, which then actually made it possible to avert the bomb release by the 2d Bomber Group. On this subject the wing commander reported as follows:

"The 54th Bomber Wing, which I commanded at the time, received through General Putzier (at that time in the rank of Brigadier General) the order to support the troops under General Student outside of Rotterdam, and that this support was to be in the form of action that would bomb the Dutch opponent out of certain districts of the city, from where they were flanking the bridges across the Meuse River and thereby preventing further advance by Student's troops. For this purpose the targets to be bombed were marked on a map.

"Shortly before the takeoff, the message reached the wing that Student had called upon Rotterdam to surrender; the message also contained the order to attack an alternate target if Rotterdam should have surrendered in the meantime (meantime, the time before takeoff and arrival over the target area). As a signal that the surrender had taken place, red signal flares were to be fired from the island in the Meuse River before Rotterdam.

"For the execution of the mission the wing was

1. Appendix 77a: Rotterdam.
divided into two groups of approximately equal strength.

In spite of the ground defense fire, the attack (see map) was carried out at an altitude of roughly 2,500 feet (750 meters) because visibility was poor owing to a thick haze, and because the wing had received very emphatic orders to insure that its attack would only strike the targets marked in the map.

"I commanded the column attacking on the right, and since no red signal lights were in evidence on the Meuse River island the attack was actually carried out.

"Our bombs were clearly within the assigned area. Ground defense fire ceased almost completely after release of the first bombs.

"Lieutenant Colonel Hoehne, leading the group attacking on the left, observed light signals on the Meuse River island, deflected his course, and attacked the alternate target.

"When I telephoned in my report on the mission to General Putzier after landing, he asked whether we had not observed red light signals on the Meuse River island. I replied that the right group had not, but that the left group had observed a few signal lights, and asked whether Rotterdam had fallen. Thereupon I was informed that contact with General Student had again been interrupted,
that Rotterdam apparently had not surrendered, and that
the wing was to repeat the same mission without delay.

"The wing took off for its second strike, but was
recalled by radio while on the approach route, because
Rotterdam had surrendered in the meantime.

"Finally, I declare herewith that in this mission
Appendix 77--6
a tactical matter was clearly involved, namely, that of
support by the Air Force for the ground forces."

Because of the international significance of the sub-
ject I have thought it proper to quote the essentially im-
portant parts of this report, although it differs some-
what from my own presentation of the matter.

To round out the picture I add the following, on the
basis of valid international law and of personal investi-
gations among the paratroopers in Rotterdam. In the light
of international law, and from the tactical point of view,
a bombing attack against the defenders of a town or city
is permissible as a form of artillery support fire.

The bombing attack struck the target area. The da-
mages caused were due primarily to fires fed by burning
oils and fats which escaped or leaked out. During the
lull in combat action which had meanwhile set in, it would
have been possible to take effective firefighting action.

1 Appendix 77b. 2. Appendix 77c.
BOMBING ATTACK AGAINST DUTCH FORCES DEFENDING
ROTTERDAM

Legend:

--- --- --- Target approach route of group attacking on the right.

--- --- --- Target approach route of group attacking on the left.

MAAS Meuse River

Criss-cross Section City areas occupied by Dutch military elements

Striped-shaded City areas occupied by Student’s troops
Forward elements of Student’s force

City area to be attacked with bombs by the 54th Bomber Wing.
THE GERMAN AIR ATTACK AGAINST ROTTERDAM IN 1940
IN THE LIGHT OF THE LAWS OF WARFARE


Within Rotterdam German paratrooper forces were in positions. As was the case with those who had jumped at the Meuse bridge at Moerdijk on 10 May 1940, their mission was to prevent any contact between the Fortress of Holland and the Belgian Army until German ground forces could arrive. Without heavy weapons these troops were in a critical situation, having been halted at the Meuse River bridges in the center of the city by strong enemy points of resistance.

of 13 May 1940

a. In response to their request, two groups of each approximately forty bombers of the 54th Bomber Wing were dispatched to attack a precisely defined triangle northwest of the bridges, with additional instructions to attack alternate targets if the city should have surrendered in the meanwhile in response to the German demand, (Contrary to Fuller, p. 73, these instructions still did not apply to all Dutch units, but only to those engaged in combat within Rotterdam, so that this was a permissible mission in the sense of Article 26 of the
"Ague Rules of Land Warfare) and if they were apprised of this fact by means of light signals fired by the paratrooper forces from the Neuse River island.

In spite of the initially very heavy ground defense fire, the attack was flown at a low altitude (approximately 2,500 feet—750 meters) so that, in spite of the hazy weather, only the marked targets would be struck.

The bombs of the right group precisely within the target; favored by fires which broke out in the oil bunkers and by inadequate fire-fighting activities, these bombs caused serious destruction and, unfortunately, also relatively/relatively/casualties. The left group, in contrast, observed light signals of the prearranged type and therefore attacked an alternate target outside the assigned area.

Rotterdam had ceased resistance in the meanwhile, so that a second air attack was averted by radio messages.

On 14 May 1940 followed the capitulation of Holland, after the other Dutch fortified lines had also in the meanwhile been breached (cf. Kesselring, pp. 74 ff.).

Numerous Allied sources have described the air attack against Rotterdam as contrary to the laws of warfare, but in these treatments of the subject, on the other hand, there is no visible evidence of any dispassionate
examination of the historically recorded circumstances and their interrelations with the law of warfare (for example, Spaight, Air Power, p. 265; Oppenheim-Lauterpacht, International Law, London, 1952, p. 527).

b. For an appraisal of the attack against Rotterdam, a purely tactical act of warfare, the decisive point also is that, by virtue of the fact of German air landings at Moerdijk and Leyden, and by reason of the battles developing therefrom against Dutch troops, the city had become involved in the operations of the German Army and in the course of these operations was to be captured by German paratroopers, so that these battles are subject to the Hague Rules of Land Warfare.

Since Dutch troops in the center of the city, at the Nieuwe River bridge, tenaciously resisted the penetration by the paratrooper forces, the protection provided for under Article 25 of the Hague Rules of Land Warfare became invalid, because Rotterdam due to these circumstances became a defended city.

Furthermore, the officer commanding the attacking troops, General Student, called on the city to surrender, in order to avert the loss of human lives and destruction, and thereby fulfilled the requirements of Article 26 of the Hague Rules of Land Warfare. When the city
refused to surrender it was permissible to use all
allowed weapons, also in the city areas, to break resis-
tance. In contrast with the defenders, the attackers
because of the status achieved at the time in the tech-
niques of airborne operations did not have the necessary
heavy weapons along with them, which is all the more
reason to compensate for this lack by bombing attacks.

In the execution of the attack, all efforts were
made to restrict the area struck by bombs to the as-
signed target area and thereby to abide by the require-
To this end an attack altitude of roughly 2,500 feet
(750 meters) was chosen, although this brought the
bomber forces within the particularly dangerous range
of the enemy defenses, thus exposing them to the hazard
of increased losses, in order to spare the city to the
maximum extent possible.

In the critical situation at the time it would
hardly have been possible to carry out the attack in a
more humane manner or in a manner more commensurate
with legal standards (By way of comparison it is only
necessary to mention the gigantic blows by the Allies
in 1943-45 in Italy, France, and Germany, and speci-
finally the attacks delivered with almost tenfold
intensity against the Monte Cassino Cloister, which
actually was undefended.

On the other hand the German side could hardly have
been expected to refrain from making the attack in view
of the Dutch resistance, the crucial situation of the
paratrooper forces, and the decisively important role
their success played in the whole plan of operations on
the German right.

Under these circumstances the attack was justified
in the form in which it took place, and its effects on
the city, although extremely regrettable, were unavoid-
able.

For this reason the question need not be examined,
whether the attack was at the same time intended as a
demonstration of German air might in order to influence
the Dutch Government to accept an armistice.
RESULT OF THE GERMAN AIR ATTACKS AGAINST ROTTERDAM IN 1940