

ASA company | Iraq

GENERAL DESCRIPTION

The new *ASA Heavy Crusher* was designed in 2007 by ASA, a company based in Iraq/Suleimanyah. The medium-sized machine is used to break and crush the topsoil of mine-affected areas. The basic vehicle used is a Fiat ALS14 bulldozer. The speed of the vehicle is reduced by changing the gearbox ratio. The crushing rotor consists of a heavy cylinder mounted with armoured teeth. Each tooth contains a carbon point for more friction resistance.

The crusher attachment is powered hydraulically from the second engine. The Crusher is operated manually but it can also be operated remotely.

This machine is a prototype, currently operating in Northern Iraq/Suleimanyah. It is claimed that it works very well in steep areas. Normal operational speed is 10 m per minute. Most parts of the machine are armour plated, including the operator cabin and crusher attachment.



ASA

CLEARANCE METHODOLOGY

Recommended operating procedure for the machine is to work in lines taking care to maintain an overlap. The working depth is between 20 cm and 40 cm depending on local conditions. The claimed daily area production in medium soil is 4,000 - 5,000 m². The cylinder, with its 180 carbon teeth, rotates at up to 200 rpm.

MACHINES IN USE TO DATE

The prototype machine is owned and operated by the ASA company in Northern Iraq/Suleimanyah.

ENGINE, FUEL AND OIL

The original Fiat bulldozer engine powers movement of the vehicle. The second (Perkins) engine at the back of the bulldozer generates hydraulic power for the crusher unit. Both engines are six-cylinder diesels.

FACTORY SUPPORT

Assuming the machine goes into production, ASA is likely to offer:

- > technical support
- > basic spare parts
- > heavy maintenance for the machine where possible
- > mechanic and operator training, if ordered
- > possible on-site visits by company technicians with a mobile workshop



ASA | In action

MAINTENANCE SUPPORT

In case of breakdown, qualified staff with a mobile workshop are available.

TESTS AND EVALUATIONS

No reports yet available.

REPORTED LIMITATIONS AND STRENGTHS

No information available.

DIMENSIONAL DATA

1. Length without attachment	4,000 mm
2. Length total	8,000 mm
3. Width without attachment	2,500 mm
4. Width total	2,900 mm
5. Clearing Working width	2,500 mm
6. Height Overall	4,000 mm
7. Mass Basic vehicle	14,000 kg
8. Mass Detachable unit(s)	7,000 kg
9. Mass Overall	21,000 kg

OPERATIONAL DATA

10. Wheels Tracks (description)	Tracks
11. Ground Bearing Pressure (kPa)	Not given
12. Hill climbing ability (in degrees)	40°
13. Number of Chains Chisels Tools	180
14. Beat pattern (hits per m ²) at different operating speeds	Not given
15. Length of Chains Tools	300 mm
16. Diameter of drum	Not given
17. Rotation Speed	150-200 rpm
18. Clearance Working depth in varying terrain	20-40 cm
19. Working Speed (m ² /h)	
> Light Soil Medium Vegetation	600 m ² /h
> Medium Soil Medium Vegetation	Not given
> Heavy Soil Dense Vegetation	500 m ² /h
20. Control of Clearance Working depth	Manually
21. Additional attachable working tools	
22. Armour	8 mm
23. Remote controlled	N/A
> greatest distance	
24. Transportation	
> short distances	Not given
> long distances	
> sea transport	
> air transport	

SYSTEM STATUS AND DEPLOYMENT

25. Machines in use	1
26. Other types	No
27. Location of use	Northern Iraq
28. Totally cleared so far (m ²)	Not given

ENGINE | FUEL | OIL

29. Engine	Fiat
30. Engine power at the flywheel	Not given
31. Sufficient power supplied to working tool	Not given
32. Fuel capacity	400 l
33. Fuel consumption	15 - 17 l/h
34. Separate engine for working unit	Perkins
35. Cooling system	Water cooled
36. Oil capacity (both engines)	25 l
37. Hydraulic oil capacity (both engines)	300 l

COSTS

38. Cost of system	Not given
39. Other costs	Not given
> training	—
> spare part set chains belts	—
40. Availability for hire	Not given

OTHER

41. Operator comfort	
42. Air conditioning	