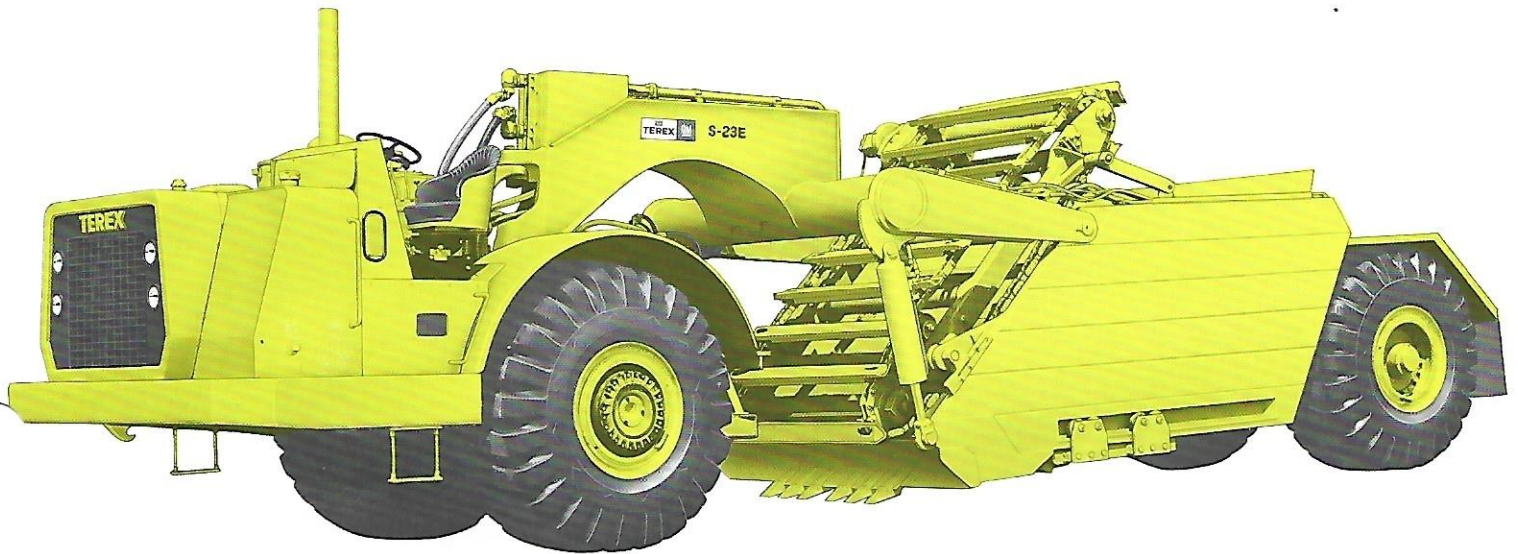


TEREX S-23E SCRAPER



- 310 Flywheel Horsepower
- Hydraulic Elevator Drive
- 53,000 Pound Payload

TEREX S-23E SCRAPER

MODEL 33TOT-H-93SH

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

CAPACITY

Heaped measure (S.A.E. Rating)23 cu. yds. (17,6 m³)

TRACTOR (33TOT-H)

ENGINE

General Motors 8V-71T 2 Cycle Diesel,

Gross Vehicle HP @ 2100 RPM333
Flywheel HP @ 2100 RPM310

NOTE: Above are SAE ratings at 500 ft. altitude and 85°F (29°C). Gross horsepower rating includes standard engine equipment, such as water pump, fuel pump, and lubricating oil pump. Flywheel horsepower is the net horsepower after deductions from gross horsepower for fan, alternator, and air compressor requirements. Turbocharged engine requires no deration to 10,000 ft. altitude.

Number of cylinders8
Bore and stroke4 $\frac{1}{4}$ " x 5" (108 mm x 127 mm)
Piston Displacement568 cu. in. (9,3 liters)
Maximum torque @ 1400 RPM920 ft-lb (127,3 kg m)
Oil-MIL-L-2104BSAE 30
FuelNo. 2-D recommended
Governor typeLimiting speed
Maximum RPM, full load2100
Maximum RPM, no load2250
Idle Speed700
Air cleaners(2) Donaldson dry, T-type (STG-14)

TRANSMISSION—Allison VCLT-4465

Allison Torqmatic Transmission with Variable Capacity Converter. Automatic converter lock-up standard in top five speed ranges. Torqmatic transmission has spur planetary gearing. Full power-shifting through hydraulically actuated multiple disc clutches. Torqmatic brake is optional.

Ratios: 1st 4.00:1 2nd 2.82:1 3rd 2.00:1
4th 1.41:1 5th 1.00:1 6th 0.71:1
Reverse 4.77:1
Transfer 1.28:1
Stall Speed1810 - 1910 RPM
Maximum Speed @ 2100 RPM24.0 MPH (38.6 km/h)

TORQUE CONVERTER—Allison VTC-495

Mounted integral with transmission. Maximum torque multiplication 2.51:1.

DRIVE AXLE

Heavy duty, full floating with single reduction bevel gear differential and planetary reduction in each wheel. TEREX operator controlled power locking differential allows lock up of both wheels in poor traction areas.

Ratios: Differential 4.70:1
Planetary 4.59:1
Total Reduction21.57:1

STEERING SYSTEM

Full hydraulic type provided by two single stage, double acting cylinders. Full 90° swing to either right or left.

Steering cylinder
bore and stroke5.5" x 17.5" (139,7 mm x 444,5 mm)
Steering pump
TypeGear
DriveGear
Capacity @ 2100 RPM
& 2000 psi32 GPM (121,1 liters/min)
System Pressure @ 1500 RPM2000 psi (141 kg/cm²)

BRAKES

Two shoe internal expanding type. Emergency braking system and air water separator standard.

Brake Lining:
Diameter23" (584 mm)
Shoe width7" (178 mm)
Lining Thickness $\frac{3}{4}$ " (19 mm)
Lining area-tractor axle690 sq. in. (4452 cm²)
Air compressor capacity12 cfm (.340 m³/min)

TIRES AND RIMS (Tractor and Scraper)

Tire Size	Rim Size
Standard - 29.5 x 29 - 28 PR, E-3.....	25" (635 mm)
Optional - 29.5 x 29 - 34 PR, E-3.....	25" (635 mm)

NOTE: Productivity and performance capabilities of TEREX scrapers are such that under specific job conditions the Ton-MPH capability of Standard or Optional tires can be exceeded. Operation above the Ton-MPH rating may lead to premature tire problems. TEREX recommends that the user consult the tire manufacturer, and evaluate all job conditions in order to make the proper tire selection.

ELECTRICAL

Direct electric starting, 24 volt GM. Two heavy duty 12 volt, 205 amp-hr. batteries. Sealed 35 amp alternator.

SERVICE DATA

	U.S. Gal. (liters)
Water Cooling System	22.8 gals. (86,3)
Fuel Tank	150 gals. (567,8)
Crankcase (dry fill)	7 gals. (26,5)
Transmission & Converter	8 gals. (30,3)
Hydraulic System	44 gals. (166,5)
Drive Axle	13.8 gals. (52,2)

SCRAPER (93SH)

BRAKES

Two shoe internal expanding type.

Brake Lining:
Diameter20" (508 mm)
Shoe width8" (203 mm)
Lining area-scraper axle624 sq. in. (4026 cm²)

ELEVATOR

DriveVane-type hydraulic motor with gear reduction.

Elevator Pump
TypeGear
DriveGear
Capacity @ 2100 RPM
& 2000 psi120 GPM (454,2 liters/min)

High Elevator Speed Pump
TypeTandem Gear
DriveGear
Capacity @ 2100 RPM
& 2000 psi32 GPM (121,1 liters/min)

System Pressure @ 2100 RPM2000 psi (141,0 kg/cm²)
Reduction ratio50.8:1
Length13'-1"

Drive Sprockets
Number2
Number of teeth per sprocket13
RPM
Low speed41.4
High speed54.3
Reverse41.4

Chains
Number2
Number of links per chain72
Chain pitch4.083" (103,7 mm)
Speeds
Low speed183 ft./min (55,7 m/min)
High speed240 ft./min (73,1 m/min)
Reverse183 ft./min (55,7 m/min)

Flights
Number18
Length6'-10 $\frac{1}{2}$ " (209,6 mm)
Width5.25" (133,4 mm)

CONTROLS

Two lever hydraulic control operation for bowl and ejection. Separate air control for elevator operation.

CUTTING EDGE

Three section cutting edge with variable length drop center. Six bolt-on ripping teeth provide maximum penetration. The two end sections are interchangeable. All sections are reversible.

Cutting Edge Dimensions
Outside sections
12" x 30 $\frac{3}{4}$ " x 1" (304,8 mm x 781,1 mm x 25,4 mm)
Center section
17" x 59 $\frac{5}{8}$ " x 1" (431,8 mm x 1520,7 mm x 25,4 mm)

BOWL

Bowl employs two single stage double acting hydraulic cylinders. Cylinders are interchangeable.

Bowl cylinder bore and stroke7" x 24" (177,8 mm x 609,6 mm)

EJECTION

Combination sliding bowl pan and ejector end gate. Controlled by two single stage, double acting hydraulic cylinders. As sliding bowl pan opens, strike off blade automatically swings into position to provide smooth, even spreading of material.

Sliding bowl pan control cylinder bore and stroke6" x 24" (152,5 mm x 609,6 mm)

Ejector end gate control cylinder bore and stroke6" x 24" (152,5 mm x 609,6 mm)

HYDRAULIC SYSTEM

Hydraulic system is filtered and has one reservoir with one single pump and one tandem pump. The single pump supplies the elevator at low speed. One section of the tandem pump supplies the steering, bowl and ejector functions while the other section supplies the high elevator speed.

DIMENSIONS

Wheelbase—Drive to Scraper Axle25'- 8" (7820 mm)
 Length—Overall40'- 9" (12421 mm)
 Length—Scraper (hitch to push block)30'- 5" (9271 mm)
 Length—Tractor (overall)16'- 1" (4902 mm)
 Width—Overall10'- 8" (3251 mm)
 Height (max.)12'- 6" (3810 mm)
 Elevator Height—Maximum at Bowl Carry10'- 3" (3124 mm)
 Elevator Height—Blade down 9'- 2" (2794 mm)
 Width of Cut 9'-11" (3023 mm)
 Depth of Cut 12" (305 mm)
 Clearance—Under Drive Axle 2'- 1" (63,5 mm)
 Clearance—Under Bowl1'-9½" (546 mm)
 Non-Stop 180° Turning Width36'-10" (11227 mm)
 Width—Center-to-Center Tractor Tire7'-5½" (2273 mm)

WEIGHTS

DISTRIBUTION—NET WEIGHT kg.
 Drive Axle65.6%..... 42,900 lbs. (19459)
 Scraper Axle34.4%..... 22,550 lbs. (10229)
 Total 65,450 lbs. (29688)
PAYLOAD 53,000 lbs. (24041)
DISTRIBUTION—GROSS WEIGHT
 Drive Axle51.3%..... 60,800 lbs. (27579)
 Scraper Axle48.7%..... 57,650 lbs. (26150)
 Total118,450 lbs. (53729)

STANDARD EQUIPMENT

Tractor:

Tachometer, Hourmeter, Engine Temperature Gauge, Engine Oil Pressure Gauge, Converter Oil Temperature Gauge, Clutch Pressure Gauge, Ammeter, Air Pressure Gauge, Air Horn, Air Restriction Gauge, Air Suspension Seat, Cutting Edge Floodlight, Emergency Braking System, Muffler, Maintenance and Parts Manuals, Power Locking Differential, Air-Water Separator.

Scraper:

Cutting Edge Teeth, Emergency Braking System.
 NOTE: Standard equipment conforms to SAE codes as follows:
 SAE J319B - Safety Brakes; SAE J321A - Full Width Front Fenders.

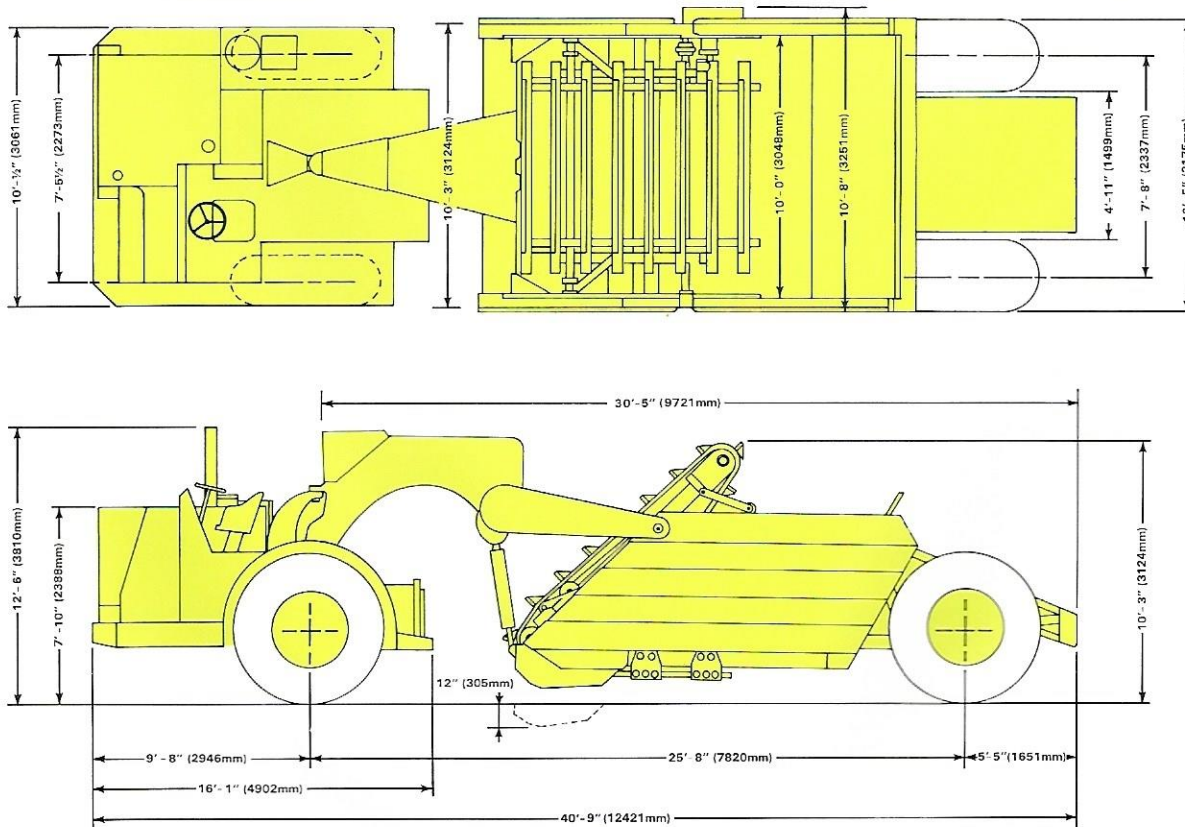
OPTIONAL EQUIPMENT

OPTIONS TO HELP USER COMPLY WITH OCCUPATIONAL SAFETY AND HEALTH ACT. Canopy, Roll-Over Protective Structure (SAE J320A) Will Fit Over Optional Cab; Seat Belt (SAE J386); Fenders, Full Width Scraper (SAE J321A).

OTHER OPTIONS: Security Kit, Brake Drum Guards, Cab, Windshield and Wiper, Cab Defroster and Heater, Canopy, Bostrom Norseman Seat, Tires, Downshift Inhibitor, Torqmatic Brake.

CONVERSION CHART

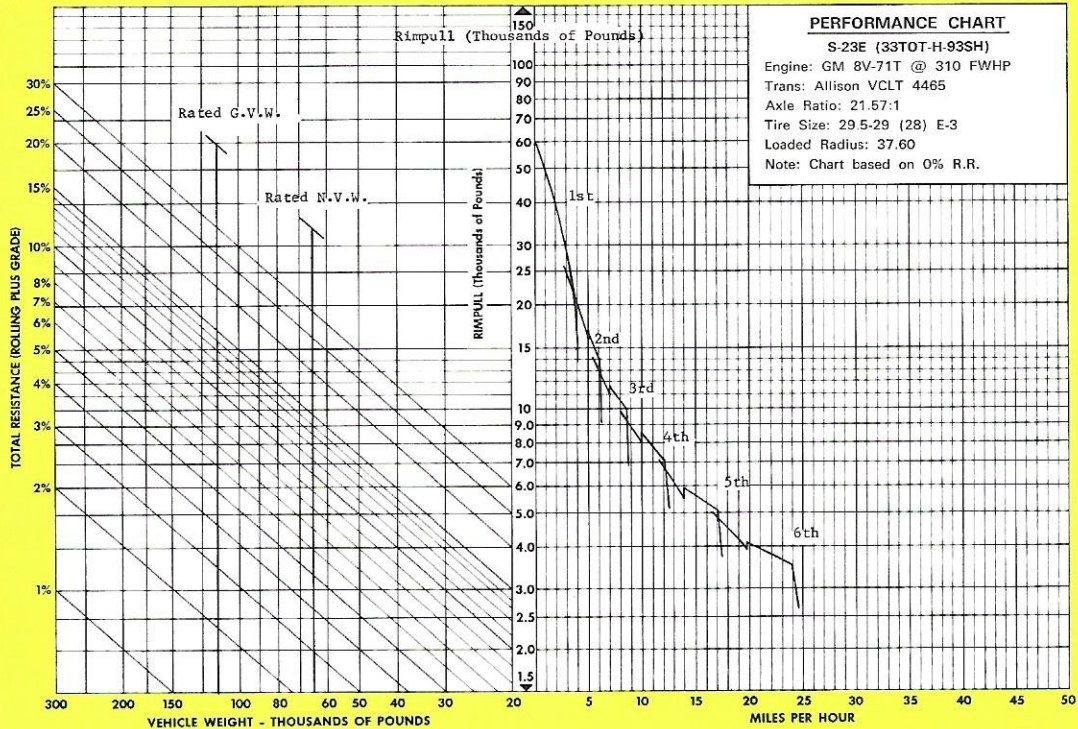
1 mile	=1.609 kilometers	1 U.S. Gal.	=8.3 lbs. (approx.)
1 foot	=30.48 centimeters	coolant	=0.4536 kilograms
1 inch	=2.54 centimeters	1 lb.	=6.452 sq. centimeters
1 U.S. Gal.	=3.785 liters	1 sq. in.	=929 sq. centimeters
1 U.S. Gal.	=0.833 Imp. gals.	1 sq. ft.	=0.836 sq. meters
1 U.S. Gal.	=7.3 lbs. (approx.)	1 sq. yd.	=0.7646 cu. meters



ALL VERTICAL MEASUREMENTS ARE FIGURED WITH BOWL AT 12" CARRY.

HEIGHT TO TOP OF OPTIONAL CAB 11'-9" (3581mm)

HEIGHT TO TOP OF OPTIONAL ROPS 12'-4" (3759mm)



- INSTRUCTIONS:**
1. FIND VEHICLE WEIGHT ON LOWER LEFT HORIZONTAL SCALE
 2. READ UP TO SLANTED TOTAL RESISTANCE LINE
 3. FROM INTERSECTION READ HORIZONTALLY TO THE RIGHT TO INTERCEPTION WITH PERFORMANCE OR RETARDER CURVE
 4. READ DOWN FOR VEHICLE SPEED



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