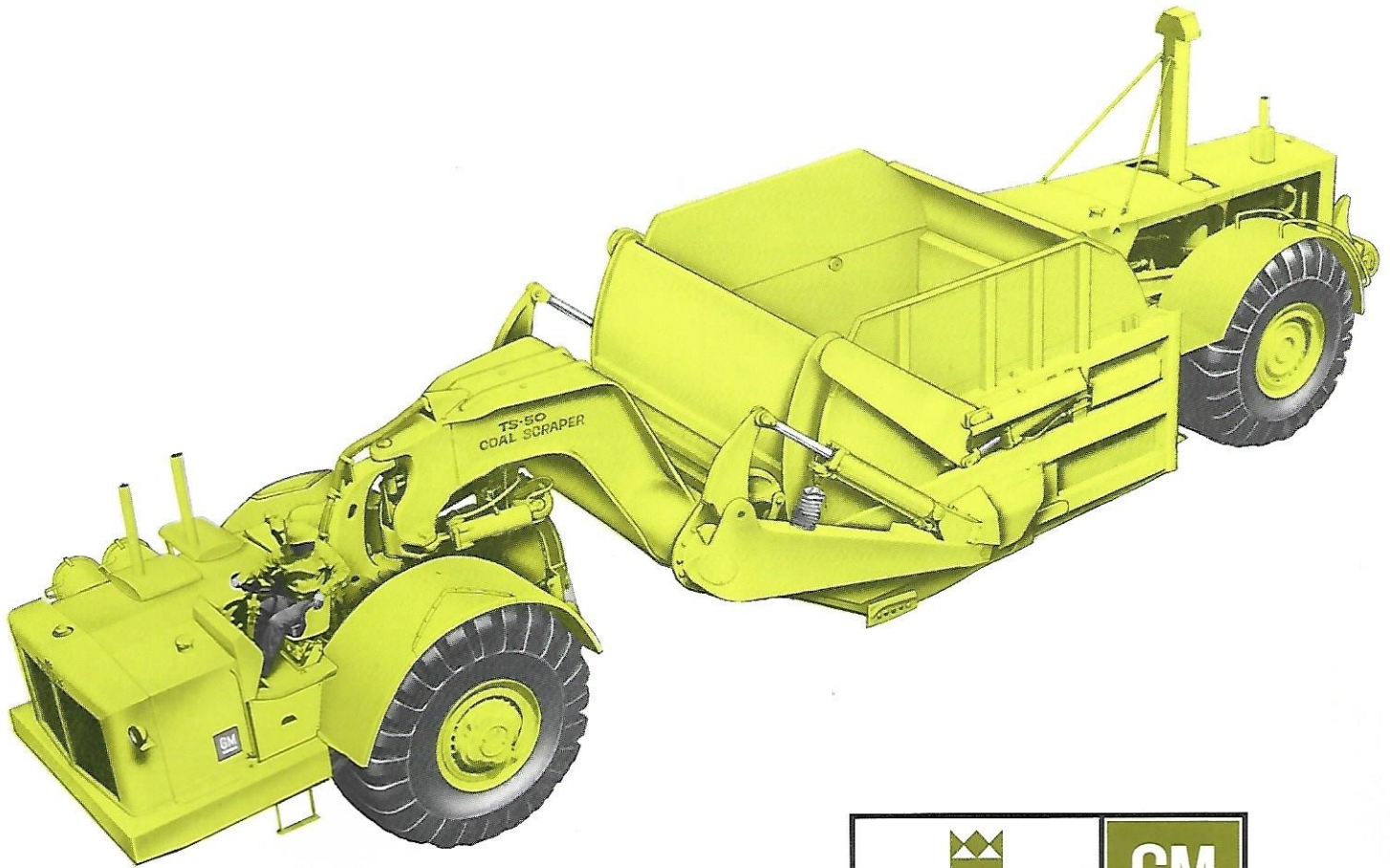


# TEREX TS-50 COAL SCRAPER



- 808 Flywheel Horsepower
- All-Wheel Drive
- 104,000 Pound Payload



# TEREX TS-50 COAL SCRAPER

## MODEL 47LOT-80SH

**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

### CAPACITY

Struck Measure (S.A.E. Rating) .....50 cu. yds. (38,2 m<sup>3</sup>)  
 Heaped 3:1 Slope .....53 cu. yds. (40,5 m<sup>3</sup>)  
 Heaped 1:1 (S.A.E. Rating) .....59 cu. yds. (45,1 m<sup>3</sup>)  
 Bowl has 28" (711 mm) backboard to prevent spillage.

## TRACTOR (47LOT)

### ENGINE

#### General Motors 12V-71T, 2 Cycle Diesel

Note: Two separate throttle controls for front and rear engines may be used independently or together.

Gross Tractor HP @ 2100 RPM .....525  
 Flywheel HP @ 2100 RPM .....482

NOTE: Above ratings applicable to 10,000 foot altitude. Gross Vehicle Horsepower rating includes standard engine equipment such as waterpump, fuel pump and lubricating oil pump. Flywheel Horsepower is the net horsepower after deductions from Gross Vehicle Horsepower for fan, alternator and air compressor requirements.

Number of cylinders .....12  
 Bore and stroke .....4<sup>1</sup>/<sub>4</sub>" x 5" (108 mm x 127 mm)  
 Piston displacement .....852 cu. in. (13,9 liters)  
 Maximum torque @ 1600 RPM .....1440 ft. lbs. (199,2 kg m)  
 Oil-MIL-L-2104B .....SAE 30  
 Fuel .....No. 2-D recommended  
 Governor type .....Limiting speed  
 Maximum RPM, full load .....2100  
 Maximum RPM, no load .....2250  
 Idle Speed .....700  
 Air cleaners .....(2) Donaldson dry, T-type (STG-16)

### TRANSMISSION—Allison CLBT-5965

Allison Torqmatic Transmission with 600 series single stage converter. Automatic converter lock-up is standard in top five speed ranges. Torqmatic transmission has spur planetary gearing. Six speeds forward, one reverse. Full powershifting through hydraulically actuated multiple disc clutches. Torqmatic brake is standard.

Ratios: 1st 4.00:1 2nd 2.68:1 3rd 2.01:1  
 4th 1.35:1 5th 1.00:1 6th 0.67:1  
 Reverse 5.12:1  
 Stall speed .....1680-1780 RPM

### TORQUE CONVERTER—Allison TC-690

Mounted integral with transmission. Maximum torque multiplication 2.60:1.

### DRIVE AXLE

Heavy duty, full floating with single reduction bevel gear differential and planetary reduction in each wheel. TEREX 601 operator controlled power locking differential standard, allows lock up of both wheels in poor traction areas.

Ratios: Differential .....2.93:1  
 Planetary .....9.10:1  
 Total Reduction .....26.66:1

### STEERING SYSTEM

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

Steering cylinder bore and stroke .....7.00" x 20.75" (178 mm x 527 mm)  
 Steering pump  
 Type .....Gear  
 Drive .....Gear  
 Capacity @ 2100 RPM  
 @ 1850 psi .....83 GPM (314.2 liters/min)

System Pressure @ 1500 RPM .....1850 psi (130 kg/cm<sup>2</sup>)

### BRAKES (Tractor and Scraper)

Four shoe internal expanding type.

Brake Lining:  
 Diameter .....26" (660 mm)  
 Shoe width .....5" (127 mm)  
 Lining Thickness .....3/4" (19 mm)  
 Lining area-tractor axle .....1194 sq. in. (7704 cm<sup>2</sup>)  
 Lining axle-scraper axle .....1194 sq. in. (7704 cm<sup>2</sup>)  
 Air compressor capacity .....24 cfm (.680 m<sup>3</sup>/min)

### TIRES & RIMS (Tractor and Scraper)

Tire Size Rim Size  
 Standard - 37.5 x 39 - 44 PR, E-3.....39" (991 mm)  
 Radial Steel Cord Tires Available.

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 (Tractor and Scraper)

Direct electrical starting, 24 volt GM. Two heavy duty 12 volt 205 amp-hr batteries. Sealed 50 amp alternator.

### SERVICE DATA

	U. S. Gal.	(liters)
Water Cooling System	29 gals.	(109,8)
Fuel Tank	200 gals.	(757,0)
Crankcase (dry fill)	8 <sup>1</sup> / <sub>2</sub> gals.	(32,2)
Transmission and Converter	18 gals.	(68,1)
Hydraulic System	73 gals.	(276,0)
Drive Axle	24 <sup>1</sup> / <sub>4</sub> gals.	(91,8)

## SCRAPER (80SH)

### ENGINE—

#### General Motors 8V-71T, 2 Cycle Diesel

Gross Scraper HP @ 2100 RPM .....350  
 Flywheel HP @ 2100 RPM .....326

NOTE: Above ratings applicable to 10,000 foot altitude. Gross Vehicle Horsepower rating includes standard engine equipment such as waterpump, fuel pump and lubricating oil pump. Flywheel Horsepower is the net horsepower after deductions from Gross Vehicle Horsepower for fan, alternator and air compressor requirements.

Number of cylinders .....8  
 Bore and stroke .....4<sup>1</sup>/<sub>4</sub>" x 5" (108 mm x 127 mm)  
 Piston displacement .....568 cu. in. (9,3 liters)  
 Maximum torque @ 1550 RPM .....960 ft. lbs. (132,8 kg m)  
 Oil-MIL-L-2104B .....SAE 30  
 Fuel .....No. 2-D recommended  
 Governor Type .....Limiting speed  
 Maximum RPM, full load .....2100  
 Maximum RPM, no load .....2250  
 Idle Speed .....700  
 Air Cleaners .....(2) Donaldson Dry, T-type (STG-14)

### TRANSMISSION—Allison CLBT-5865

Stall Speed .....1870-1970 RPM  
 Other specifications and ratios same as tractor.

### TORQUE CONVERTER—Allison TC-560

Mounted integral with transmission. Maximum torque multiplication 2.70:1.

### DRIVE AXLE

Heavy duty, full floating with TEREX 402 single reduction bevel gear differential and planetary reduction in each wheel. NoSPIN differential is standard.

Ratios: Differential .....4.55:1  
 Planetary .....5.80:1  
 Total Reduction .....26.39:1

### CONTROLS

Three lever control allows independent operation of the apron, bowl and ejector. Following the loading and ejection cycle, a single movement of the apron lever closes the apron and raises the bowl to travel position. Hydraulic valves are air actuated.

### CUTTING EDGE

Four section cutting edge with variable length drop center. All blades interchangeable and reversible. Double row of bolts standard.

Cutting edge dimensions ....16" x 32" x 1" (406 mm x 812 mm x 25.4 mm)



## BOWL

Bowl employs two single acting cylinders with bell crank linkage. Cylinders are interchangeable.

Bowl cylinder bore and stroke .....6.25" x 49.18" (159 mm x 1249 mm)

## APRON

True radial design, power closing apron operated by two double acting cylinders. Cylinders act directly on apron arms which are located outside the bowl for non-binding operation. Maximum opening for easy ejection. Cylinders are interchangeable.

Apron cylinder bore and stroke .....7.00" x 25.88" (178 mm x 657 mm)

Apron closing force, any bowl position, approx. ....43,000 lbs. (19,505 kg)

## EJECTION

Positive roll-out-snap-out hinged plate ejector. Powered by two interchangeable, single stage, double acting cylinders.

Ejector cylinder bore and stroke .....7.00" x 40.71" (178 mm x 1034 mm)

## HYDRAULIC SYSTEM

Hydraulic system is filtered and has one reservoir with two separate interchangeable pumps for steering and scraper controls.

Scraper Bowl Control Pump

Type .....Gear Drive .....Gear

Capacity @ 2100 RPM & 2000 psi .....83 GPM (314.2 liters/min)

System Pressure @ 1500 RPM .....2000 psi (141 kg/cm<sup>2</sup>)

## PUSH BLOCK

Exclusive roller push block assures total control of bowl by scraper operator.

## SERVICE DATA

	U. S. Gal.	(liters)
Water Cooling System	27 gals.	(102,2)
Fuel Tank	130 gals.	(492,0)
Crankcase (dry fill)	5½ gals.	( 20,8)
Transmission and Converter	18 gals.	( 68,1)
Drive Axle	27¾ gals.	(103,6)

## DIMENSIONS

Wheelbase—Drive to Scraper Axle	34'- 8"	(10566 mm)
Length—Overall	53'-11"	(16434 mm)
Width—Overall	13'- 3"	( 4039 mm)
Height—Max.	15'- 2"	( 4623 mm)
Apron Opening	9'- 2½"	( 2807 mm)
Width of Cutting Edge	10'- 8"	( 3251 mm)
Width of Cut	11'- 1"	( 3378 mm)
Depth of Cut (Max.)	1'- 1¾"	( 340 mm)
Depth of Spread (Max.)	1'-10½"	( 572 mm)

## Clearance—

Under Drive Axle	2'- 6½"	( 775 mm)
Under Bowl	2'- 2"	( 660 mm)
Non-Stop 180° Turning Width for vehicle clearance	48'-10"	(14884 mm)
Shipping Width with Arms Demounted	11'-11½"	( 3645 mm)

## WEIGHTS

NET WEIGHT DISTRIBUTION		kg.
Tractor	54.0%	73,305 lbs. ( 33251)
Scraper	46.0%	62,445 lbs. ( 28325)
Total		135,750 lbs. ( 61576)
PAYLOAD		104,000 lbs. ( 47174)

## GROSS WEIGHT DISTRIBUTION

Tractor	49.3%	118,197 lbs. ( 53614)
Scraper	50.7%	121,553 lbs. ( 55136)
Total		239,750 lbs. (108750)

## STANDARD EQUIPMENT

### (Tractor and Scraper)

Dry 'T' Type Air Cleaners, Full Flow Hydraulic Filtration, Engine Oil Pressure Gauges, Engine Temperature Gauges, Converter Oil Temperature Gauges, Ammeters, Clutch Pressure Gauges, Torqmatic Brake, Air Restriction Gauges, Maintenance & Parts Manuals.

**Tractor Only:** Tachometer, Hourmeter, Air Pressure Gauge, Air Horn, Air Suspension Seat, Cutting Edge Floodlight, Power Locking Differential.

**Scraper Only:** NoSPIN Differential, Power Train Warning Alarm, Roller Push Block, Demountable Pull Arms.

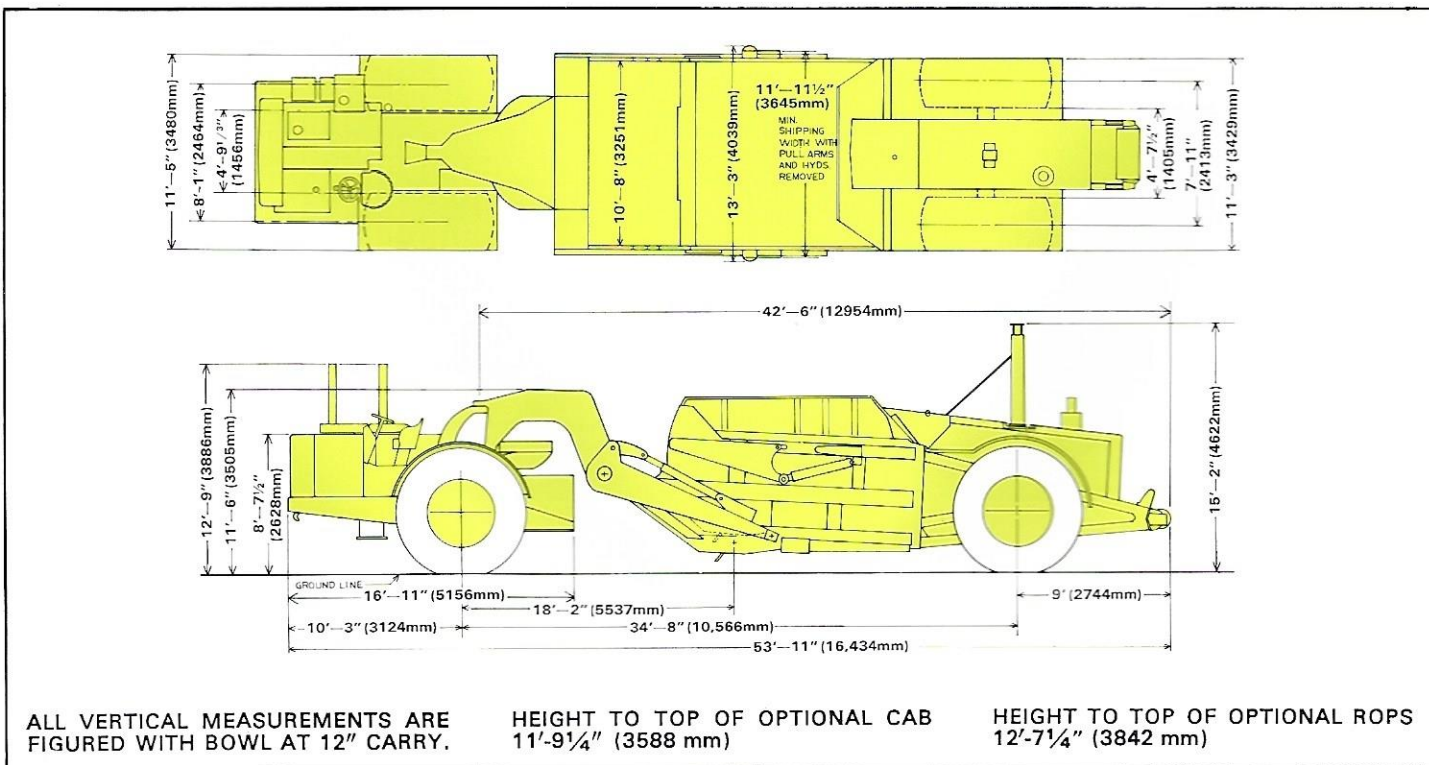
## OPTIONAL EQUIPMENT

**OPTIONS TO HELP USER COMPLY WITH OCCUPATIONAL SAFETY & HEALTH ACT:** Fenders Full Width, Tractor & Scraper (SAE J321A); Rear Fenders, Includes Steps & Grab Handles (SAE J185); Canopy, Roll Over Protective Structure (SAE J320A), Will Fit Over Optional Cab; Seat Belt (SAE J386); Emergency and Parking Brake System (SAE J319B); Reverse Alarm (SAE J994); Front and Rear Mufflers.

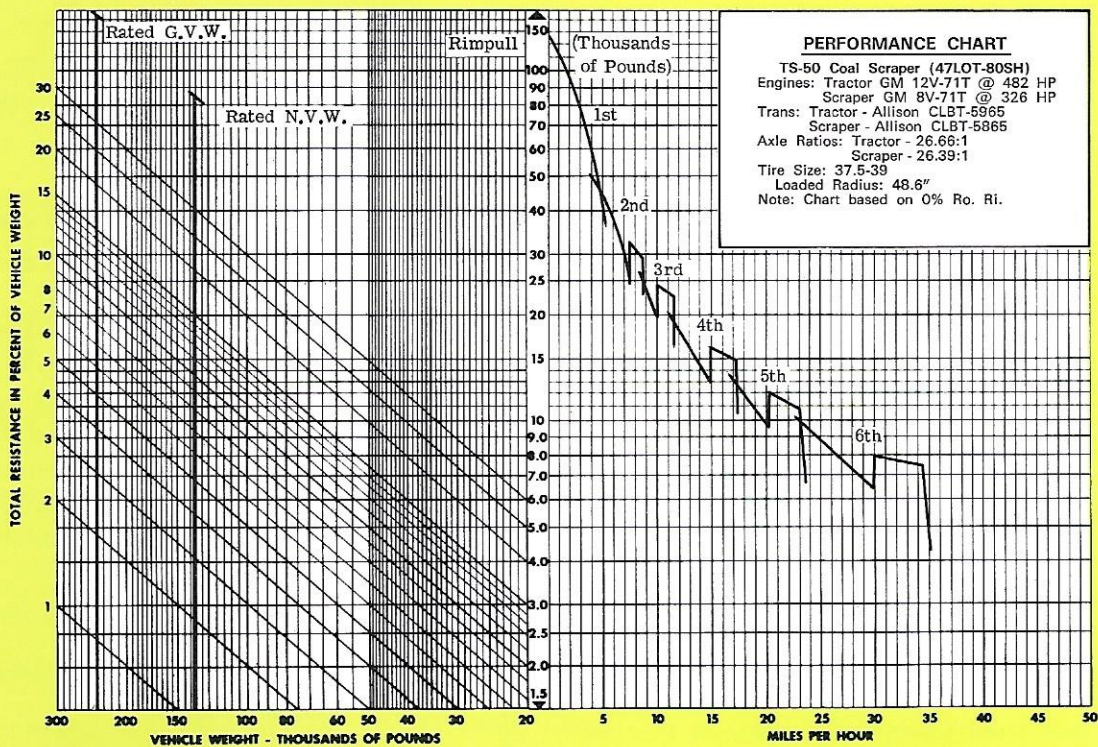
**Other Options:** Brake Drum Guards, Cab, Cab Defroster and Heater, Sun Canopy, Bostrom Norseman Seat, Windshield with Wiper, Soundpac (Includes Cab), Security Kit.

## CONVERSION CHART

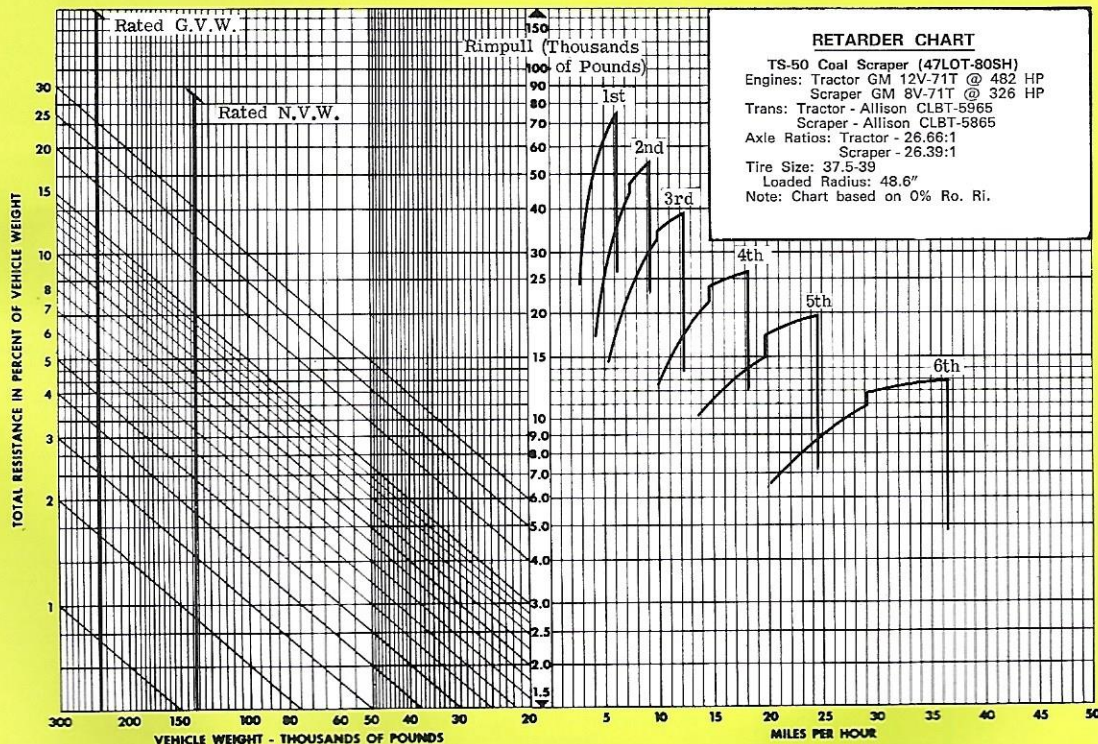
1 mile	=1.609 kilometers	1 U.S. Gal.	=8.3 lbs. (approx.)
1 foot	=30.48 centimeters	coolant	
1 inch	=2.54 centimeters	1 lb.	=0.4536 kilograms
1 U.S. Gal.	=3.785 liters	1 sq. in.	=6.452 sq. centimeters
1 U.S. Gal.	=0.833 imp. gals.	1 sq. ft.	=929 sq. centimeters
1 U.S. Gal.		1 sq. yd.	=0.836 sq. meters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







- INSTRUCTIONS:**
1. FIND VEHICLE WEIGHT ON LOWER LEFT HORIZONTAL SCALE
  2. READ UP TO SLANTED TOTAL RESISTANCE
  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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