



Allis Chalmers

Operator's Manual

TS-160

Tractor Scraper

JENSALES

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Operator's Manual

AC-O-TS-160

GENERAL DESCRIPTION

The Model T5160 Motor Scraper is a 28,500 pound rubber tired unit powered with a 6 cylinder, 4 cycle, "DIESEL" engine. The T5160 Motor Scraper consists of a two-wheeled, high speed, rubber tired tractor (T-160), flexibly joined to a two-wheeled rubber tired hydraulically operated scraper (S-160) to form a conventional four-wheeled self-propelled unit. A pedestal-type coupling combines a vertical and horizontal pivot arrangement which permits complete flexibility of the unit when working on uneven terrain.

Power from the engine is transmitted through a 13", 2 plate, spring loaded type engine clutch to the transmission. From the transmission, the power is transmitted through a universal joint assembly to the bevel pinion and then to the bevel gear and a heavy-duty automotive type differential. From the differential, power is transmitted through the pinion drive shafts to the final drive pinions, idler gears, and the final drive gears which drive the tractor axles.

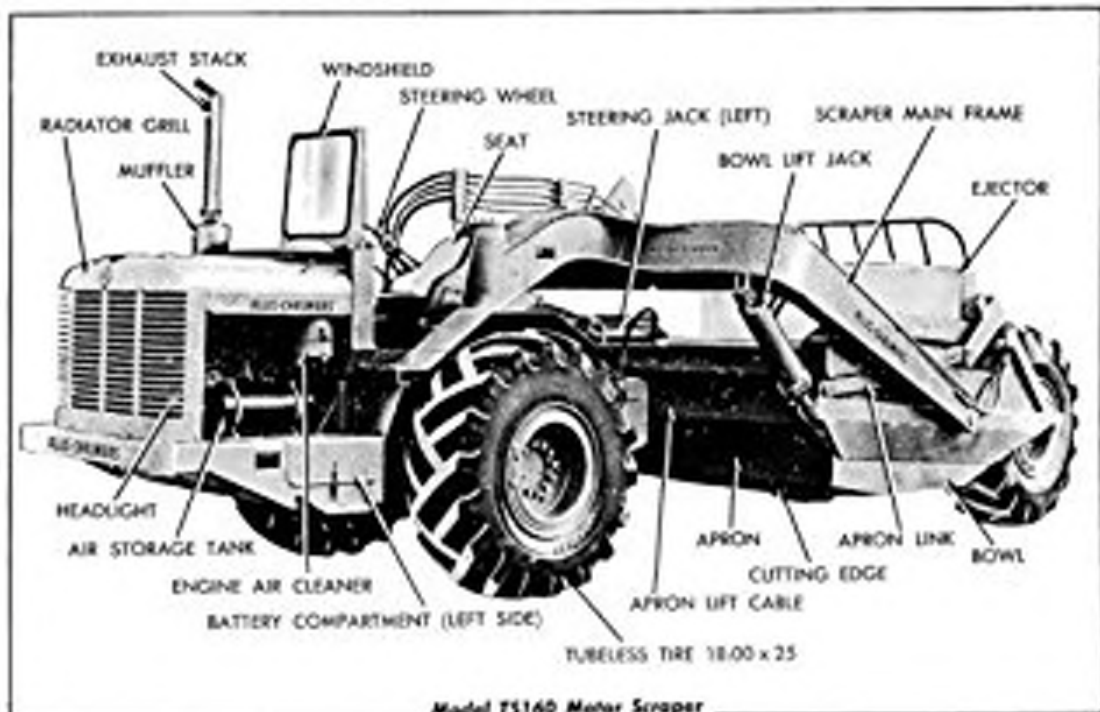
The transmission provides five forward speeds ranging from 3.1 M.P.H. in first gear to 22.4 M.P.H. in fifth gear and a reverse speed of 3.1 M.P.H., at the rated engine speed of 2200 R.P.M. (governed full load).

Steering of the tractor and control of the scraper is accomplished hydraulically by a tandem pump, control valves, hydraulic lines, hydraulic jacks, two scraper control levers, steering wheel, and the necessary control linkage.

The Motor Scraper is equipped with air-actuated, four-wheel brakes. Air is supplied by a belt driven, governor controlled, two-cylinder, piston type compressor.

The scraper is of welded box-type construction, open-top design, and has a curved bowl bottom and positive-forced ejection. The scraper is equipped with a three-piece, heat-treated, reversible cutting edge, and a heavy pusher block.

The standard model Motor Scraper is equipped with electric starting and lighting equipment, muffler, full width crankcase guard, adjustable bucket-type operator's seat with foam rubber cushions, windshield, air horns, tachometer, hour meter, front pull hook, and tubeless tapered bead traction-tread tires.



Model T5160 Motor Scraper

FIG. 1

GENERAL SPECIFICATIONS

General Dimensions and Weight:

Overall Length	31 ft. 5 1/4 in.
Overall Width	10 ft. 0 in.
Overall Height (less exhaust stack)	8 ft. 4 in.
Wheel Base (carry position)	18 ft. 4 1/4 in.
Tread (with standard tires)	
Tractor	6 ft. 0 in.
Scraper	6 ft. 0 in.
Turning Radius	20 ft. 6 in.
Width required for Non-Slip 180° Turn	24 ft. 8 1/2 in.
Ground Clearance - Tractor	17 1/2 in.
Scraper	17 in.
Shipping Weight (Approximate)	28,500 lbs.

Scraper Dimensions:

Front Apron Opening	7 ft. 1 1/2 in.
Width of Cut	8 ft. 1 1/2 in.
Depth of Cut	0 to 25 in.
Depth of Spread	0 to 17 in.
Cutting Edge	
Type	3-piece Reversible and Identical
Size	1 in. x 10 in. x 32 in.

Scraper Capacity:

Struck, Cubic Yards	7.0
Heaped, Cubic Yards	9.5

Weight Distribution: Empty Loaded

Front Axle	66%	50%
Rear Axle	34%	50%

Engine:

Make	"Allis-Chalmers" Diesel
Model	7D5-516
Type	4 Stroke Cycle (supercharged)
Number of Cylinders	6
Bore	4 1/2 in.
Stroke	5 1/2 in.
Crankshaft Rotation (viewed from fan end)	Clockwise
Number of Main Bearings	7
Piston Displacement	516 cu. in.
Lubrication	Full Pressure
Fuel Used	Diesel Fuel
Fuel Supplied By	"American Bosch" Fuel Injection Pump
Low Idle Speed	525 R.P.M. ± or - 25
High Idle Speed	2200 R.P.M. ± or - 25
Governed at Full Load	2200 R.P.M.

Road Speeds

(At 2200 R.P.M. Engine Speed):

1st Gear	3.1 M.P.H.
2nd Gear	5.1 M.P.H.
3rd Gear	8.5 M.P.H.
4th Gear	13.3 M.P.H.
5th Gear	22.4 M.P.H.
Reverse Gear	3.1 M.P.H.

Scraper Operating Method:

Type of Ejection	Positive Forward
Apron, Bowl, and Ejector	Positive Hydraulic
Hydraulic Pump	HP-40

Steering:

Type	Two Speed Hydraulic
Hydraulic Pump	HP-40
Jacks (2 Double Acting)	5 in. Dia.

Air Compressor:

Capacity, Cubic Feet Per Minute	7 1/2
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Brakes:

Type	Air on 4 Wheels
Tractor	
Size Each	18 x 7 in.
Total Contact Area	435 sq. in.
Scraper	
Size Each	18 x 7 in.
Total Contact Area	435 sq. in.

Electrical Systems:

Type	24 Volt
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Tires:

Standard Machine	
Type	Tubeless - Traction Tread
Size	18.00 x 25 (16 P.R.)
Special Equipment	
Type	Tubeless - Traction Tread
Size	23.50 x 25 (16 P.R.)

Capacities (Approximate)

(U. S. Standard Measure):

Fuel Tank	80 Gal.
Cooling System	11 Gal.
Crankcase and Filters	4 1/2 Gal.
Engine Air Cleaner	1 Gal.
Transmission	3 Gal.
Gear Case - Differential Compartment	26 Gal.
Final Drive Compartments (each)	5 Gal.
Hydraulic System	28 Gal.

The Allis-Chalmers Manufacturing Company reserves the right to make changes in the above specifications or to add improvements at any time without notice or obligation.

TRACTOR, ENGINE, AND SCRAPER SERIAL NUMBERS

On all parts orders and all correspondence relative to the TS160 Motor Scraper, it is necessary that the tractor, engine, and scraper serial numbers be given. This will properly identify the particular motor scraper and will assure obtaining the correct replacement parts for it.

The tractor serial number is stamped on a serial number plate, located on the left side of the tractor main frame.

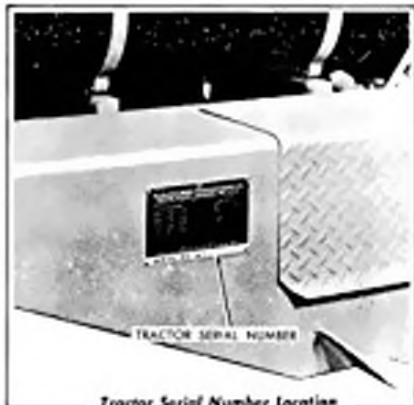
The engine serial number is stamped on a serial number plate, located on the left rear side of the cylinder block.

The scraper serial number is stamped on a serial number plate, attached to the left side of the scraper main frame.



Engine Serial Number Location

FIG. 3



Tractor Serial Number Location

FIG. 2



Scraper Serial Number Location

FIG. 4