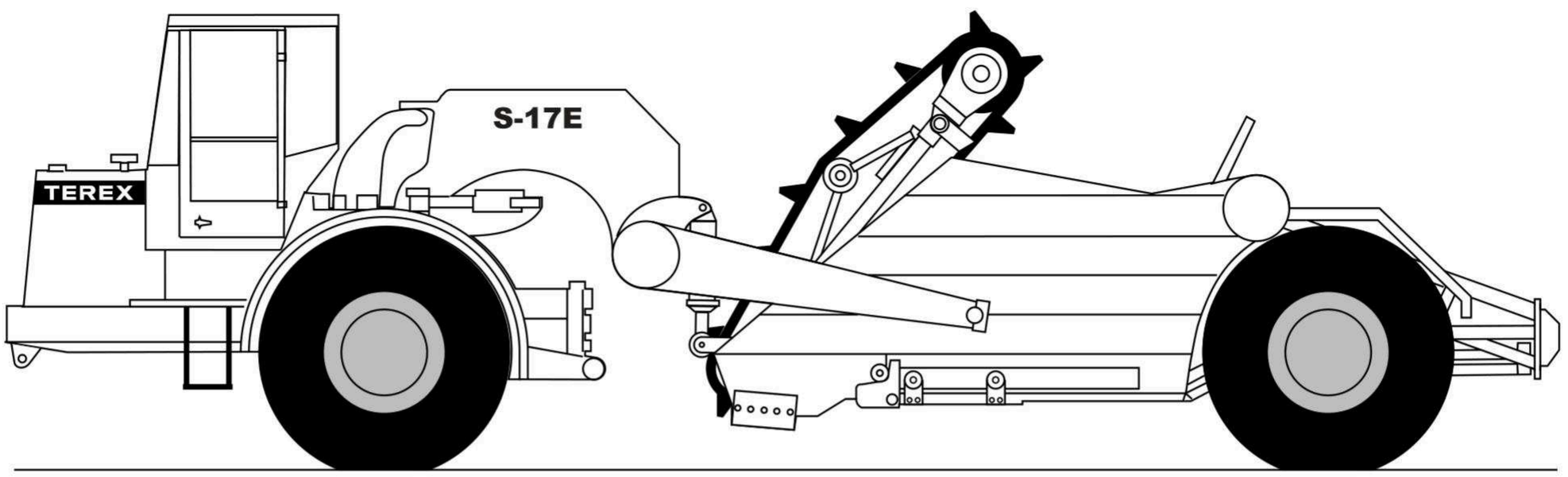
TEREX

S17E
Elevating Scraper
Maintenance Manual



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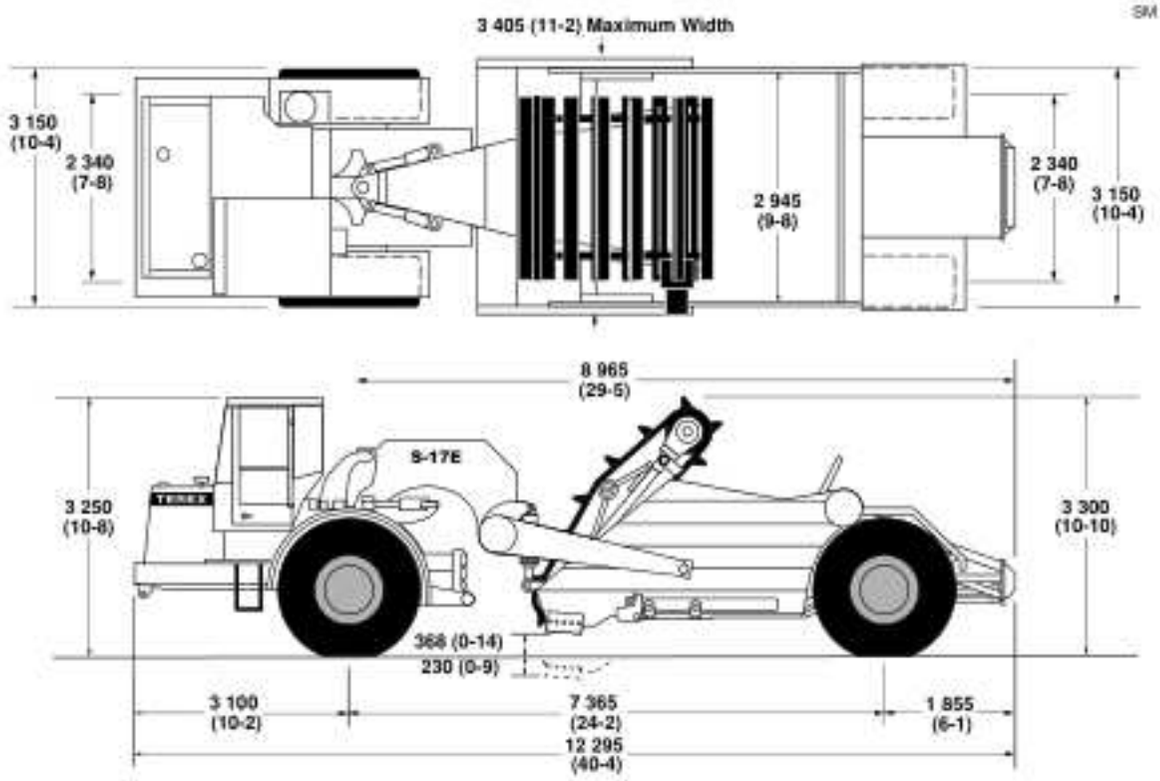
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All vertical dimensions with bowl at 370 mm (14.5 in) carry position. Unit empty. **Dimensions in mm (ft-in)**

Apron opening	2 100 mm (6 ft 11 in)
Wheelbase	7 365 (24-2)
Length - overall	12 295 (40-4)
Length - scraper hitch to push block	8 965 (29-5)
Width - overall maximum	3 405 (11-2)
Elevator Height - maximum at Bowl carry	3 300 (10-10)
Elevator Height - Blade down	3 090 (10-2)
Width of Cut (cutting edge)	3 110 (9-10.5)
Depth of Cut - maximum	230 (0-9)
Depth of Spread - maximum	318 (12.5)
Clearance under Bowl	368 (0-14)
Non-stop 180° Turning Width for vehicle clearance	18.1 m (59-6)

Fig. 1 - Machine Dimensions

ENGINE

Make ..... Detroit Diesel
Model/Type ..... Series 40, 4 Cycle Turbocharged
Gross Power @ 2 000 rev/min ..... 224 kW (300 hp)
Net Power @ 2 000 rev/min ..... 213 kW (285 hp)

Gross power rated to SAE J1995 June 90.
Engine emission meets USA EPA / CARB MOH 40 CFR and EU NRMM (Non-Road Mobile Machinery) Directive.

Maximum Torque
@ 1 300 rev/min ..... 1 458 Nm (1 075 lb ft)
Cylinder Configuration ..... 6 in line
Bore and Stroke ..... 117 x 136 mm (4.59 in x 5.35 in)
Piston Displacement ..... 8.7 litre (530 in³)
Air cleaner ..... Dry, Aspirated
Starting ..... Electric
Maximum Speed (No load) ..... 2 450 rev/min
Maximum Speed (Full load) ..... 2 200 rev/min
Idle Speed ..... 700 rev/min
Safe Operating Angle ..... 30°/57% Grade

TRANSMISSION

Funk DF250 Powershift, counter-shaft type transmission with integral torque converter. Eight speeds forward and one reverse. Automatic lockup in the top six forward gears. Manual, electric shifting and downshift inhibitor.

Maximum Speed ..... 51 km/h (31.5 mile/h)
Stall Speed ..... 2 013 rev/min
Torque Converter Ratio (front and rear) 2.133:1

SPEEDS WITH STANDARD DIFFERENTIAL								
	Forward							
Gear	1	2	3	4	5	6	7	8
Ratio	8.04	5.73	4.11	2.43	2.03	1.44	1.04	0.739
km/h	4.38	6.15	8.53	11.97	17.28	24.34	33.72	47.45
mile/h	2.72	3.821	5.30	7.44	10.74	15.13	20.96	24.49
	Reverse							
Ratio	4.11							
km/h	9.06							
mile/h	5.63							

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13. Align outer flanged case (57) with the inner flanged case (56) by identifying marks made during disassembly, and attach with bolts (61). Make sure thrust washer (52) is properly mated with dowel pins (51). Tighten bolts (61) to 220 Nm (165 lbf ft) torque, lubricated.

14. Align identification marks made on the ring gear and inner flanged case, then assemble. Apply Loctite 277, or suitable equivalent, to bolts (18) and install in the ring gear and inner flanged case. Tighten the bolts to 1 020 Nm (750 lbf ft) torque, lubricated.

Installation of Ring Gear and Differential Assembly

Numbers in parentheses refer to Fig. 4.

The bearing adjusters (21 & 63) serve three purposes: They preload bearings (17 & 16), adjust backlash between the ring gear (6) and pinion (67) teeth, and adjust tooth contact patterns. Install and adjust the ring gear (6) assembly in the carrier housing (1) as follows:

1. Mount the ring gear and differential assembly on the differential housing (1), then install bearing cups (16) properly mated with bearing cones (17). Install bearing caps (66) over the side bearing cups and attach to the housing with bushings (40) and bolts (41). Turn the bolts in snug, but not tight.

Note: Bearing caps (66) are mated to their respective bearing bosses on the housing (1) and must be returned to their original positions according to the identifying marks made during disassembly. If necessary to replace housing (1) or caps (66), the housing, caps and bolts (41) must be replaced as an assembly.

2. Measure diagonally across the lock pads of bearing caps (66) with a micrometer, special tool No.S-5-21241 as shown in Fig. 12 and record the dimension.

3. Install bearing adjusters (21 & 63) in their respective bearing caps (66).

4. Place a dial indicator as shown in Fig. 13 to measure ring gear backlash. Tighten bearing adjuster (63) on the ring gear side until there is no backlash between the ring gear and pinion teeth.

5. Tighten the opposite bearing adjuster (21) until the distance between the bearing cap lock pads measured in Step 2 is increased 0.08 - 0.15 mm (0.003 - 0.006 in). This establishes the required bearing preload.

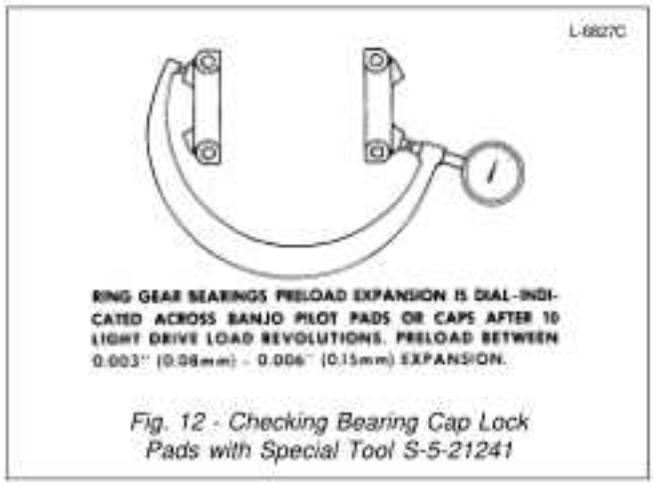


Fig. 12 - Checking Bearing Cap Lock Pads with Special Tool S-5-21241

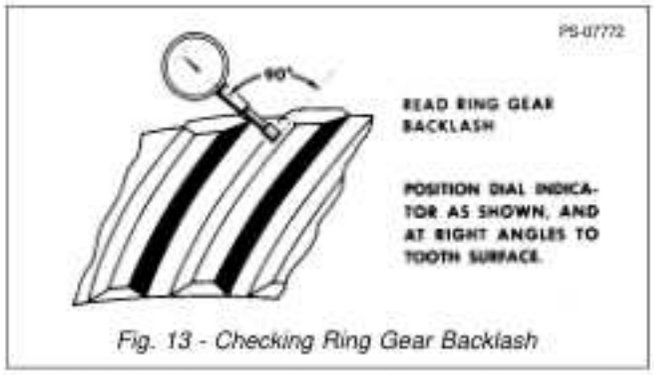


Fig. 13 - Checking Ring Gear Backlash

6. The backlash between ring gear (6) and pinion gear (67) should be 0.30 - 0.41 mm (0.012 - 0.016 in). Check the backlash, and if it is less than 0.30 mm (0.012 in), back off adjuster (63) and tighten adjuster (21) the same number of notches until the correct backlash is attained. If the backlash is more than 0.41 mm (0.016 in), back off adjuster (21) and tighten adjuster (63) the same number of notches until the correct backlash is attained. By loosening and tightening opposite bearings adjusters (21 and 63) the same number of notches the bearing preload established in Step 5 is maintained. See Fig. 14.

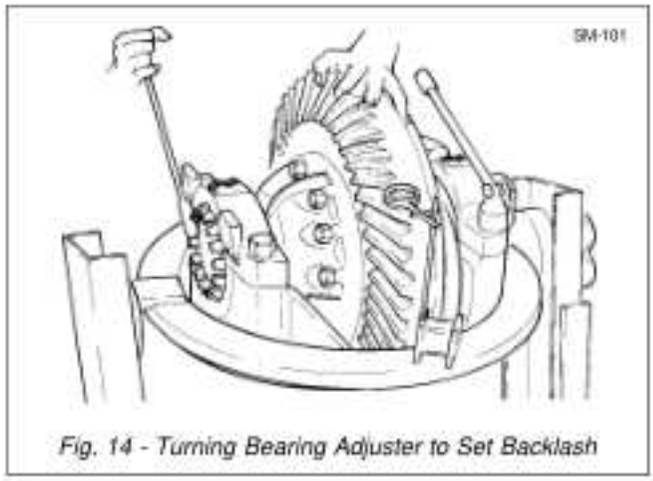
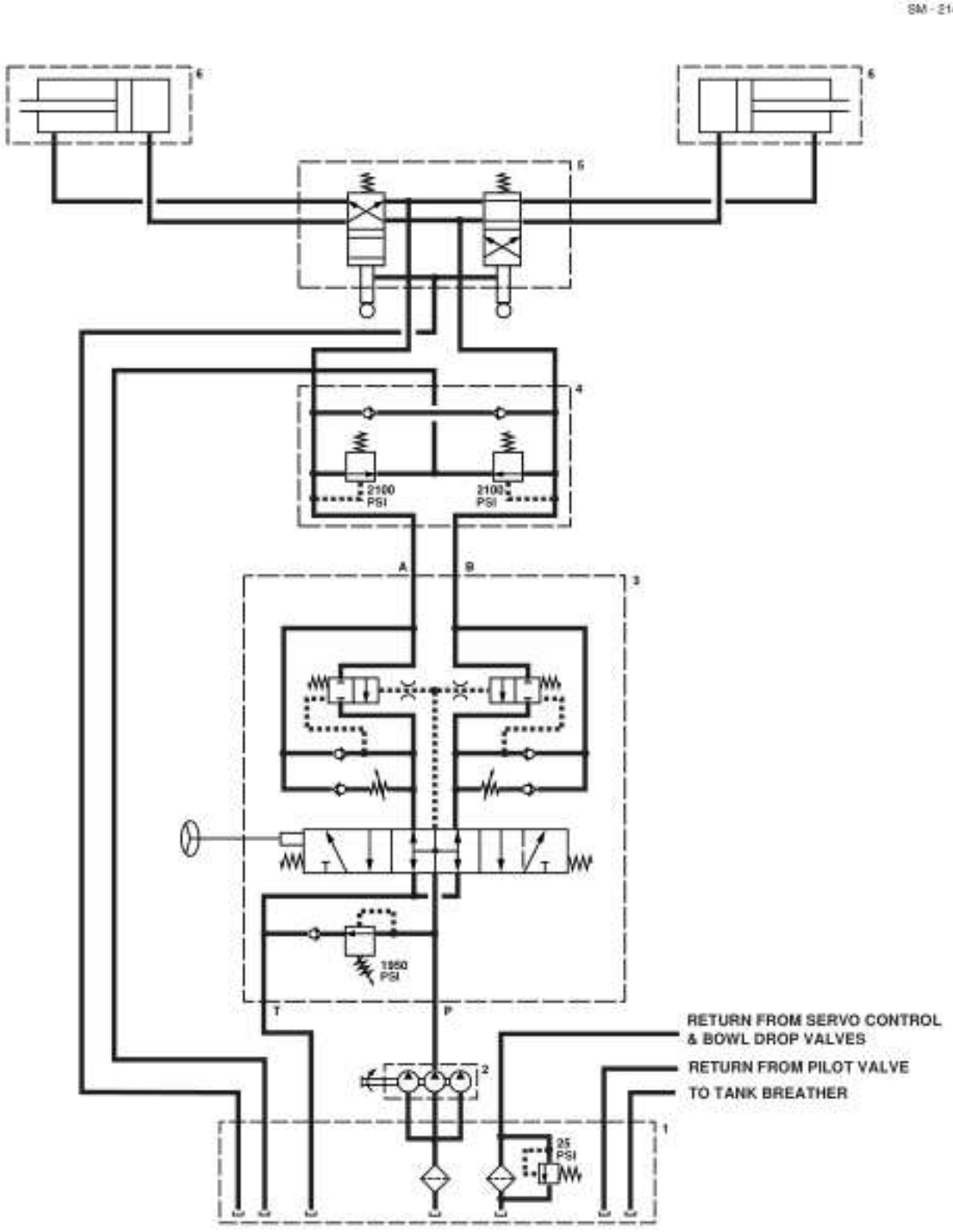


Fig. 14 - Turning Bearing Adjuster to Set Backlash

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1 - Hydraulic Tank
2 - Triple Pump
3 - Steering Valve
4 - Double Relief Valve
5 - Flow Reversing Valve
6 - Steering Cylinders

Fig. 1 - Steering System Schematic Diagram

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AIR CONDITIONING DIAGNOSIS (continued)		
CONDITION	PROBLEM	REMEDY
3. Noise - Evaporator		
Rubbing/scraping	Fan blade or blower	Repair or replace
Hissing	Low charge/leak	Correct charge/repair leak
Chatter/Knocking	Air in system	Evacuate and re-charge
Noisy case	Loose brackets/screws	Tighten
Motor squeal	Dry bearings	Replace
4. Air Conditioning Inadequate After Short Period Of Operation		
Cooling quits	Moisture in system	Replace thermostat
	Thermostat	Correct the charge
	Clutch	Check pull-in of clutch or replace
Cooling intermittent	Moisture in system	Replace drier
5. Electrical Trouble		
Blower motor or condenser fan motor inoperable	Defective circuit breaker or bad wiring connections	Replace. Clean and tighten connections
	Tight motor bearing	Repair or replace motor
	Switch open or shorted	Repair or replace switch
Slow running blower	Shaft binding	Replace motor - worn bearings
	Wheel misaligned	Replace
	Bad blower switch	Replace blower
	Insufficient current	Install larger alternator
Clutch inoperable	Defective circuit breaker	Replace
	Loose connection	Clean and tighten connection
	Broken wire - ground	Repair wire
	Shorted or open field	Replace field

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