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MANUAL PREVIEW

Caterpillar

Operator's Manual

12 Motor Grader

S/n 70D1 & 71D1 & up

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Operator's Manual

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Foreword

Caterpillar products are a result of advanced engineering, skilled manufacturing, and the finest materials metallurgical science can select. Thousands of satisfying, economical working hours are built into each machine.

Whether or not the owner derives the maximum service from his machine depends largely on the care exercised in its operation and maintenance. This book is written to give the operator essential information regarding the day-to-day operation, lubrication and adjustment of the machine. Careful adherence to these instructions will result in assured economy.

More and more Caterpillar owners are depending upon their dealer for service other than the care and adjustments described in this book. This practice is recommended because Caterpillar dealers have stocks of genuine Caterpillar parts and are equipped with tools designed and built by Caterpillar. Their servicemen are factory-trained and are kept closely informed by the factory regarding advanced methods of servicing Caterpillar products — thus, in all ways they are equipped to render the best of service.

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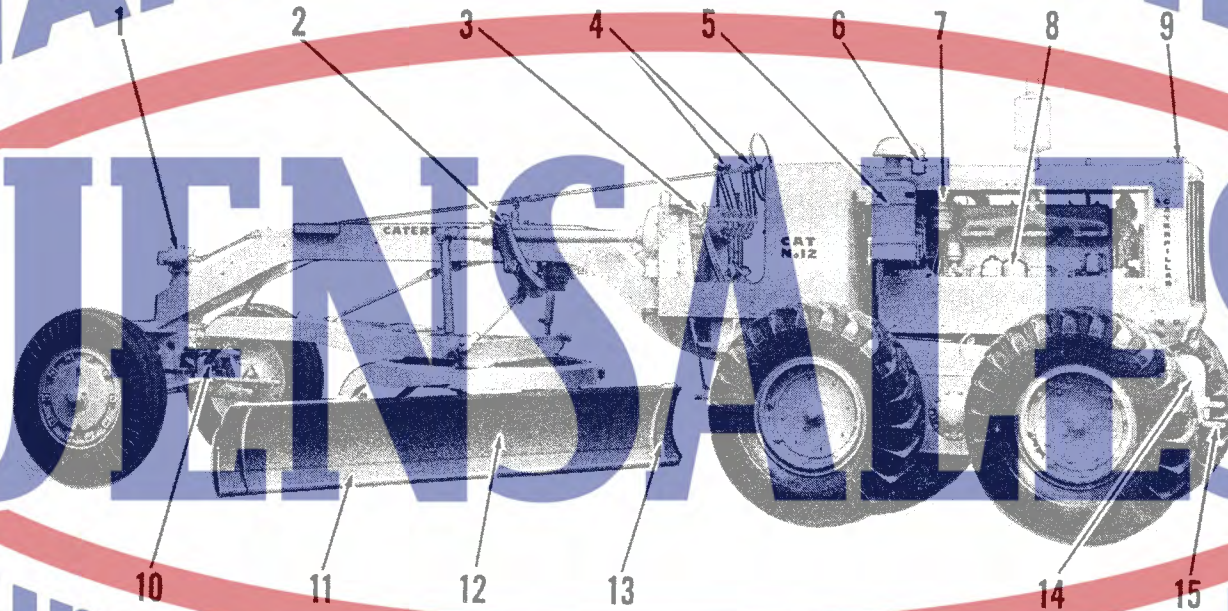
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NO. 12 MOTOR GRADER — LEFT SIDE VIEW

- 1—Steering gear assembly. 2—Center shift rack. 3—Hand brake control lever.
4—Blade lift, center shift, circle reverse and front wheel lean control levers.
5—Diesel engine air cleaner. 6—Diesel engine pre-cleaner. 7—Starting engine
air cleaner. 8—Crankcase lubricating oil filter. 9—Radiator filler cap. 10—Leaning
wheel control. 11—Cutting edge. 12—Moldboard. 13—End bit.
14—Tool box. 15—Pull lug.

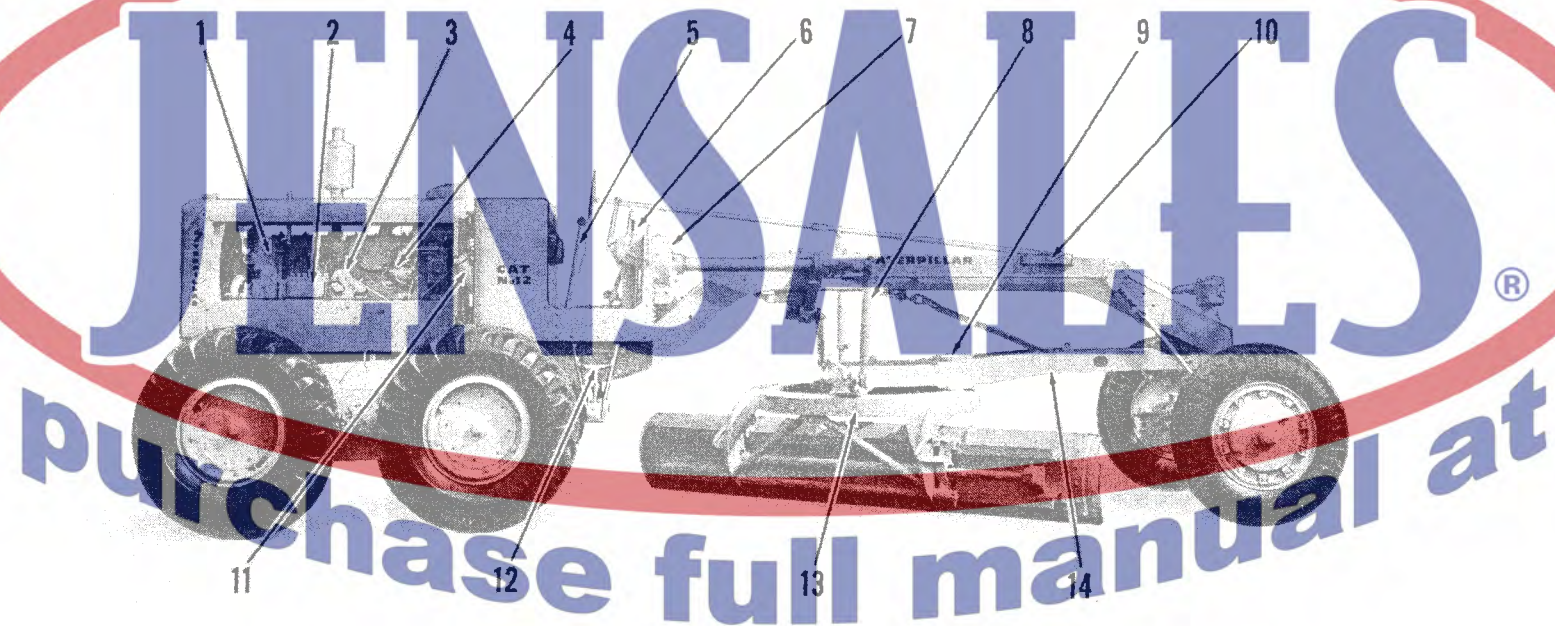
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NO. 12 MOTOR GRADER — RIGHT SIDE VIEW
1-Fuel filter housing, 2-Fuel injection pump housing, 3-Governor, 4-Magneto, 5-Speed selector lever, 6-Governor control lever, 7-Blade lift control, 8-Blade lift link assembly, 9-Circle reverse control, 10-Scarifier mounting bracket, 11-Diesel fuel tank filler, 12-Step, 13-Circle, 14-Circle drawbar.

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CO Crankcase Lubricating Oil

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3

DIESEL ENGINE CRANKCASE

Open oil cooler vent valve (6) so the oil will drain more rapidly from the oil cooler each time the crankcase is drained.



3

DIESEL ENGINE CRANKCASE LUBRICATING OIL FILTER

Remove the plug from the filter base to drain the unfiltered oil from the base and replace the filter element (7) with a new element at every 250 service hour interval. See the topic, "Crankcase Lubricating Oil System".



3

DIESEL ENGINE CRANKCASE

After draining crankcase, fuel injection pump housing and clutch compartments, replace drain plugs and refill crankcase at (8) with approximately 26 quarts of oil. Run engine for two minutes then add oil to bring level to full mark on gauge while engine is running.



3

DIESEL ENGINE CRANKCASE BREATHER

Wash breather element (9) each time crankcase oil is drained.



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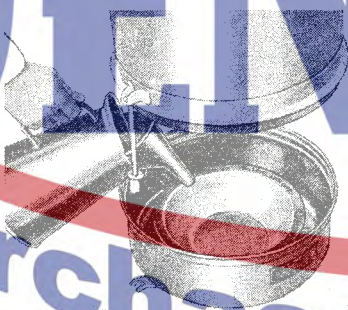
STARTING ENGINE

AIR CLEANER

(Motor Graders 70D1-Up)

Inspect the oil in the air cleaner cup every 50 service hours. Wash and refill cup to oil level bead when oil will not flow freely or if the sediment in the cup is $\frac{1}{4}$ inch deep. See the topic, "Air Cleaners".

Refill the cup with the same S.A.E. grade of oil as is used in the diesel engine crankcase and the same type of oil may also be used. However, it is permissible to use clean, undiluted reclaimed oil or the most inexpensive straight mineral oil. See the topic, "Crankcase Lubricating Oil."



T17125

DIESEL ENGINE AIR CLEANER CUP

Inspect the oil in the air cleaner cup every 10 to 50 service hours depending upon dust conditions. Wash and fill both the inner and outer cups to the flat face of the inner cup on later engines and to the oil level bead on earlier engines either when the oil will not flow freely, the sediment in the cup is $\frac{1}{2}$ inch deep, or every 50 service hours, whichever occurs first. See the topic, "Air Cleaners".

Refill the cup with the same S.A.E. grade of oil as is used in the diesel engine crankcase and the same type of oil may be used. However, it is permissible to use clean, undiluted reclaimed oil or the most inexpensive straight mineral oil. See the topic, "Crankcase Lubricating Oil".

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DIESEL ENGINE AIR CLEANER TRAY ASSEMBLY

When the oil cup is removed for inspection, remove the air cleaner separable tray screens from the cup, inspect and wash them if dirty. Inspect the inside of the air cleaner inlet pipe and clean if necessary. Clean the inside of the air cleaner inlet pipe every 50 service hours. See the topic, "Air Cleaners".

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