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### INVESTIGATING JD3140 TRACTOR BREAKDOWNS AND THEIR REASONS

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**ABSTRACT** Knowing the exact costs of repair and maintenance can lead machinery managers to save money and prevent future breakdowns. This research was done by gathering and classifying the type and occurrence of breakdowns of JD3140 tractors which are commonly used in Markazi province in Iran. Related information was gathered from 7 validated service stations and 40 selected professional users. Data analysis showed that hydraulic systems and hydraulic steering pumps were the most frequently repaired components, 18% and 9.5% respectively. Power take off shafts and water pumps were the next most frequently serviced components (8% each). Neglect of regular servicing, use of improper hydraulic oil and maintenance done by unskilled workers were the main reasons for hydraulic system breakdowns. Other investigations showed that steering pumps and cylinder breakdowns were the main reasons for steering malfunction.

**Keywords:** Repair and maintenance, Costs, JD 3140, Iran.