**Table 11.** Machine characteristics from auction sites

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| **Name** | **Type** | **Description** |
| AuctioneerID | Categorical (values 1-29) | identifier of a particular auctioneer, i.e. company that sold the machine at auction. Not the same as datasource. |
| Blade\_Type | Categorical (values 1-11) | machine configuration - describes type of blade |
| Coupler | Categorical (values 1-4) | machine configuration - type of implement interface |
| Datasource | Categorical (values 1-6) | Source of the sale record; some sources are more diligent about reporting attributes of the machine than others. Note that a particular datasource may report on multiple auctioneerIDs. |
| Drive\_System | Categorical (values 1-5) | machine configuration; typcially describes whether 2 or 4 wheel drive |
| Enclosure | Categorical (values 1-7) | machine configuration - does machine have an enclosed cab or not |
| fiBaseModel | Categorical (values 1-1961) | disaggregation of fiModelDesc |
| fiModelDesc | Categorical (values 1-5059) | Description of a unique machine model (see ModelID); concatenation of fiBaseModel & fiSecondaryDesc & fiModelSeries & fiModelDescriptor |
| fiModelDescriptor | Categorical (values 1-141) | disaggregation of fiModelDesc |
| fiProductClassDesc | Categorical (values 1-74) | disaggregation of fiModelDesc |
| fiSecondaryDesc | Categorical (values 1-178) | disaggregation of fiModelDesc |
| Forks | Categorical (values 1-3) | machine configuration - attachment used for lifting |
| Grouser\_Type | Categorical (values 1-4) | machine configuration - type of treads a crawler machine uses |
| Hydraulics | Categorical (values 1-13) | machine configuration - type of hydraulics |
| Operation Hours | Numeric | Machine working time in hours. Missing values are filled with -1. |
| MachineID | Categorical | identifier for a particular machine; machines may have multiple sales |
| ModelID | Categorical (values 1-5281) | identifier for a unique machine model |
| Pattern\_Changer | Categorical (values 1-4) | machine configuration - can adjust the operator control configuration to suit the user |
| ProductGroup | Categorical (values 1-6) | identifier for top-level hierarchical grouping of fiModelDesc |
| ProductGroupDesc | Categorical (values 1-6) | description of top-level hierarchical grouping of fiModelDesc |
| ProductSize | Categorical (values 1-7) | The size class grouping for a product group. Subsets within product group. |
| Production Year | Categorical (values 1-53) | year of manufacturer of the Machine |
| Ride\_Control | Categorical (values 1-4) | machine configuration - optional feature on loaders to make the ride smoother |
| Ripper | Categorical (values 1-5) | machine configuration - implement attached to machine to till soil |
| Stick\_Length | Categorical (values 1-30) | machine configuration - length of machine digging implement |
| SalesID | Categorical | unique identifier of a particular sale of a machine at auction |
| SaleMonth | Categorical (values 1-12) | month of sale. |
| State | Categorical (1-51) | US State in which sale occurred |
| Thumb | Categorical (values 1-4) | machine configuration - attachment used for grabbing |
| Tire\_Size | Categorical (values 1-18) | machine configuration - size of primary tires |
| Track\_Type | Categorical (values 1-3) | machine configuration - type of treads a crawler machine uses |
| Transmission | Categorical (values 1-9) | machine configuration - describes type of transmission; typically automatic or manual |
| Travel\_Controls | Categorical (values 1-8) | machine configuration - describes operator control configuration |
| Undercarriage\_Pad\_Width | Categorical (values 1-20) | machine configuration - width of crawler treads |
| UsageBand | Categorical (values 1-4) | value (low, medium, high) calculated comparing this particular Machine-Sale hours to average usage for the fiBaseModel; e.g. 'Low' means this machine has less hours given it's lifespan relative to average of fiBaseModel. |