

We will print the table with numbers of times each category occurs. Basing on these numbers we will plot histograms.

**Important note:** NaN values (which make up a significant part in our dataset) are not plotted. However, their amount in the attribute may be calculated using the 1st row of the table.

#	Column	Non-Null Count	Dtype
---	-----	-----	-----
Numerical Attributes - in main report (look report.pdf)			
0	Sales ID	412698 non-null	int64
1	Sales Price	412698 non-null	float64
2	Machine ID	412698 non-null	int64
3	Model ID	412698 non-null	int64
4	datasource	412698 non-null	int64
5	Auctioneer ID	392562 non-null	float64
6	Year Made	412698 non-null	int64
7	MachineHours CurrentMeter	147504 non-null	float64

Categorical Attributes - in this appendix

8	Usage Band	73670 non-null	object
9	Sales date	412698 non-null	object
10	Model Description	412698 non-null	object
11	Base Model	412698 non-null	object
12	Secondary Description	271971 non-null	object
13	Model Series	58667 non-null	object
14	Model Descriptor	74816 non-null	object
15	Machine Size	196093 non-null	object
16	Product Class Description	412698 non-null	object
17	State of Usage	412698 non-null	object
18	Product Group	412698 non-null	object
19	Product Group Description	412698 non-null	object
20	Driver System	107087 non-null	object
21	Enclosure	412364 non-null	object
22	Control	197715 non-null	object
23	Touchpad Type	81096 non-null	object
24	Control Type	152728 non-null	object
25	Version	81096 non-null	object
26	Transmission	188007 non-null	object
27	Turbo Charged	81096 non-null	object

28	Extra features	25983	non-null	object
29	Machine Width	25983	non-null	object
30	Clean Room	25983	non-null	object
31	Engine Horsepower	25983	non-null	object
32	Hydraulics	330133	non-null	object
33	Push Block	25983	non-null	object
34	Ripper	106945	non-null	object
35	Scarifier	25994	non-null	object
36	Tip Control	25983	non-null	object
37	Screen Size	97638	non-null	object
38	Coupler	220679	non-null	object
39	Couple System	44974	non-null	object
40	Grouser Tracks	44875	non-null	object
41	Hydraulics Flow	44875	non-null	object
42	Tupper Type	102193	non-null	object
43	Screen Size.1	102916	non-null	object
44	Stick Length	102261	non-null	object
45	Thumb	102332	non-null	object
46	Pattern Changer	102261	non-null	object
47	Grouser Type	102193	non-null	object
48	Backhoe Mounting	80712	non-null	object
49	Blade Type	81875	non-null	object
50	Travel Possibilities	81877	non-null	object
51	Differential Type	71564	non-null	object
52	Steering Controls	71522	non-null	object

dtypes: float64(3), int64(5), object(45)

Usage Band - 73670 / 412698

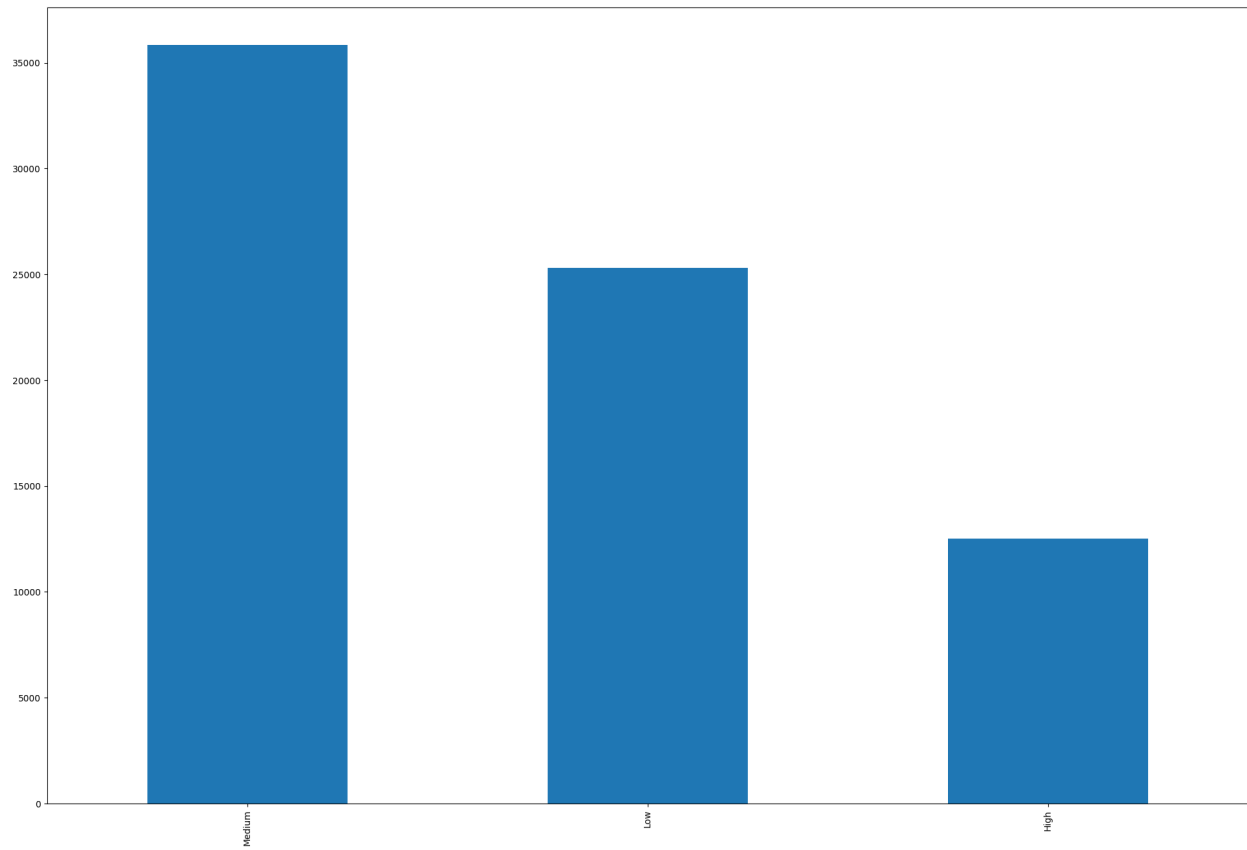
-----

Medium 35832

Low 25311

High 12527

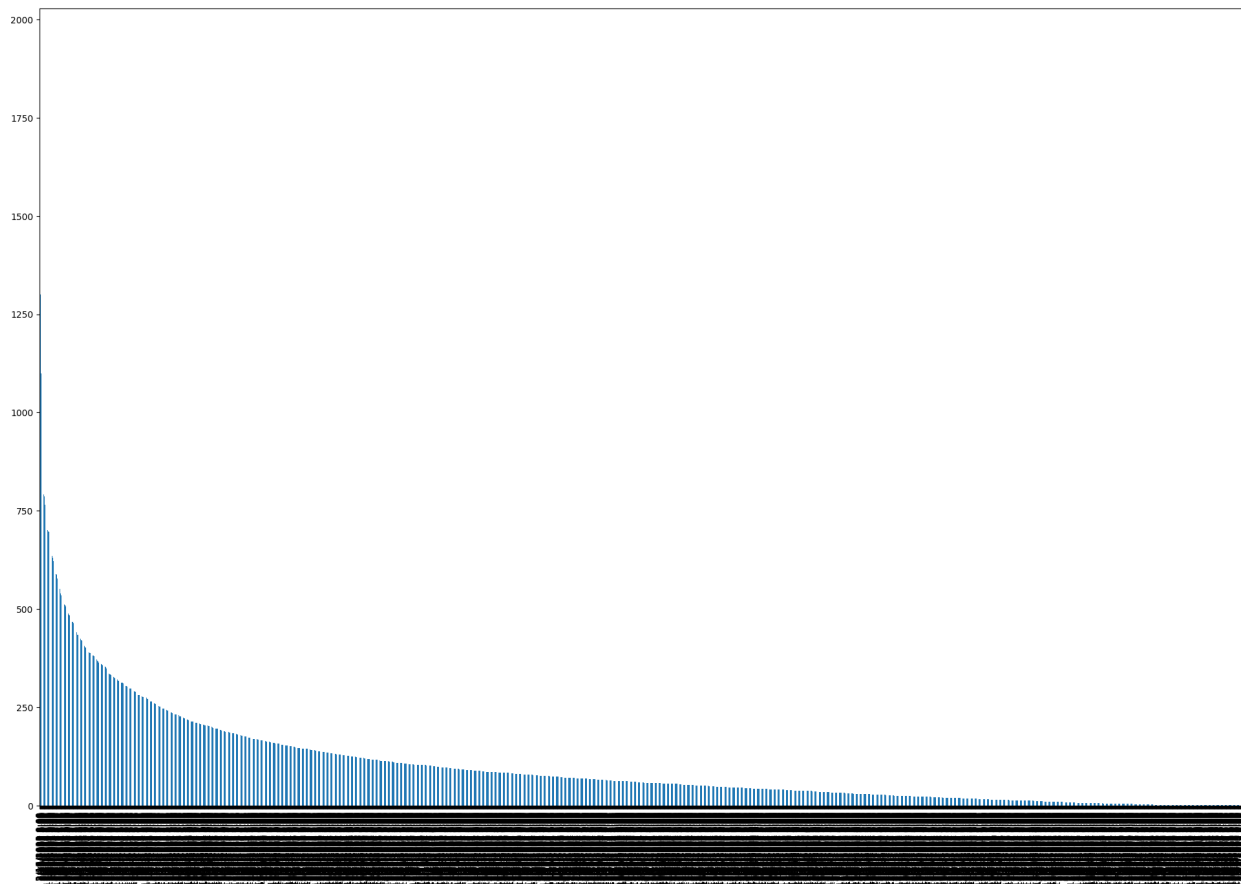
Name: Usage Band, dtype: int64



Sales date - 412698 / 412698

```
-----  
2/16/2009 0:00      1932  
2/13/2012 0:00      1598  
2/15/2011 0:00      1352  
2/19/2008 0:00      1300  
2/15/2010 0:00      1219  
...  
1/4/2011 0:00        1  
5/8/2007 0:00         1  
1/12/2009 0:00        1  
9/3/2010 0:00         1  
10/11/1997 0:00        1
```

Name: Sales date, Length: 4013, dtype: int64



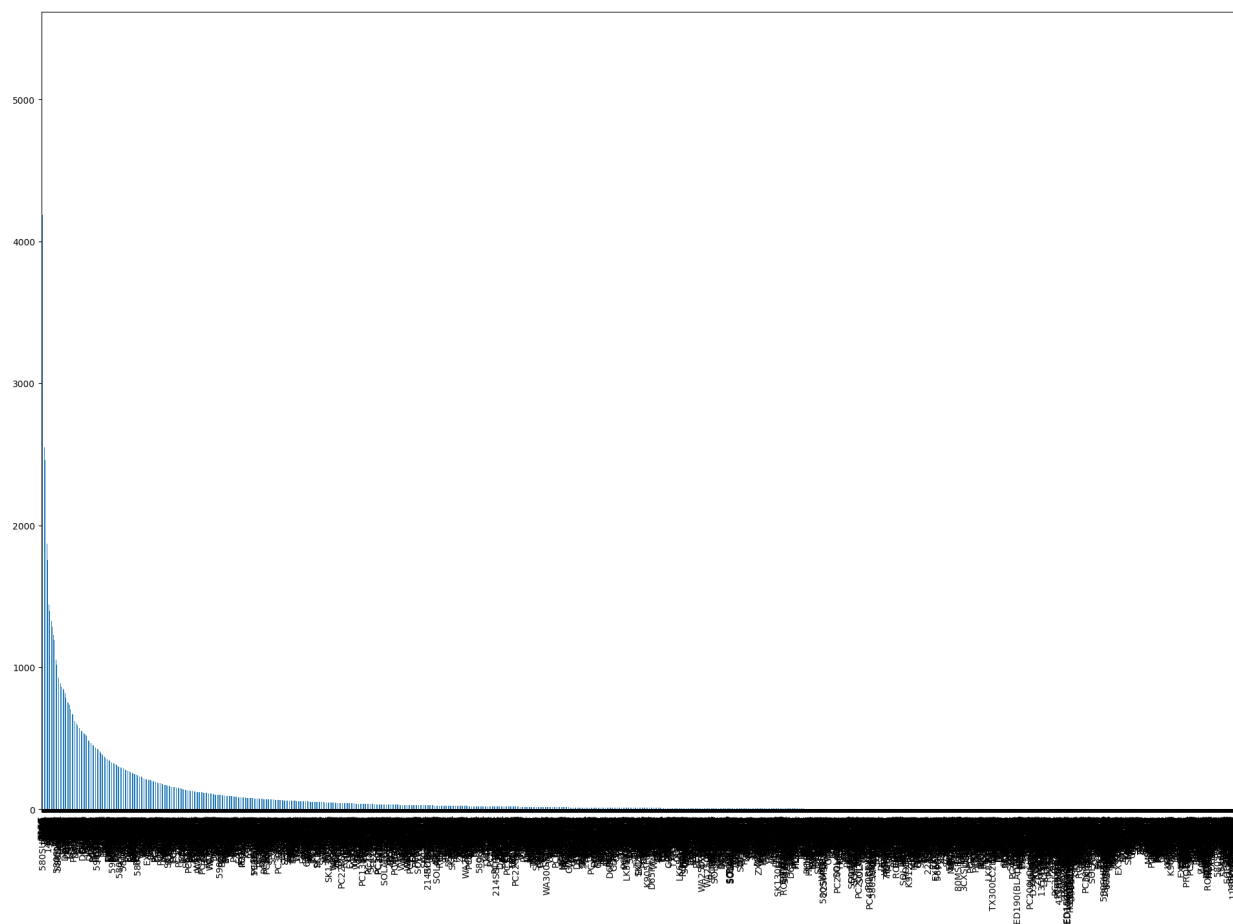
Model Description - 412698 / 412698

```
-----  
310G      5348  
416C      4976  
580K      4364  
310E      4296  
140G      4186
```

...

```
130       1  
EL240B    1  
365BL     1  
716A      1  
55N2      1
```

Name: Model Description, Length: 5059, dtype: int64



Base Model - 412698 / 412698

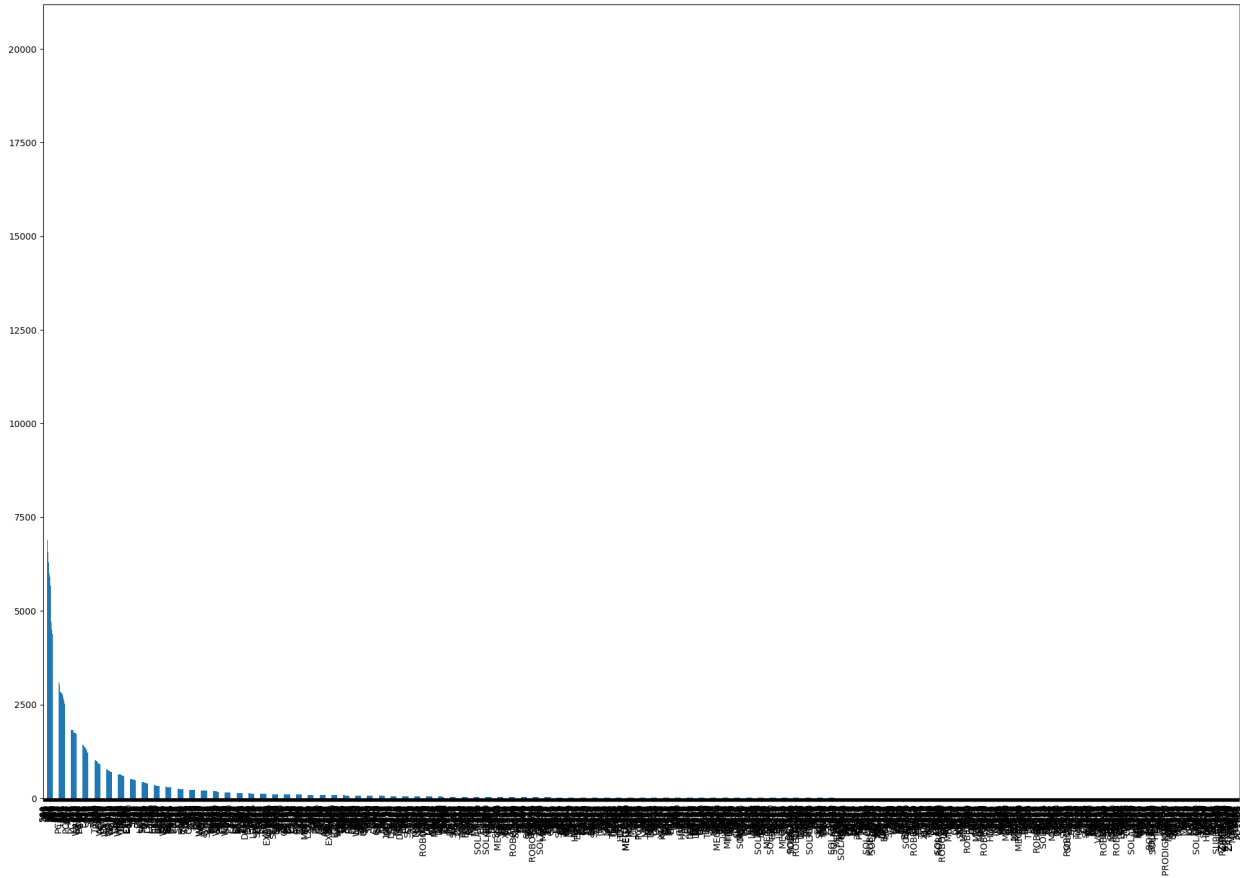
-----

580	20179
310	17886
D6	13527
416	12900
D5	9636

...

R50	1
3D1700	1
901	1
805	1
PC1500	1

Name: Base Model, Length: 1961, dtype: int64



# Secondary Description - 271971 / 412698

```

C      44431
B      40165
G      37915
H      24729
E      21532

```

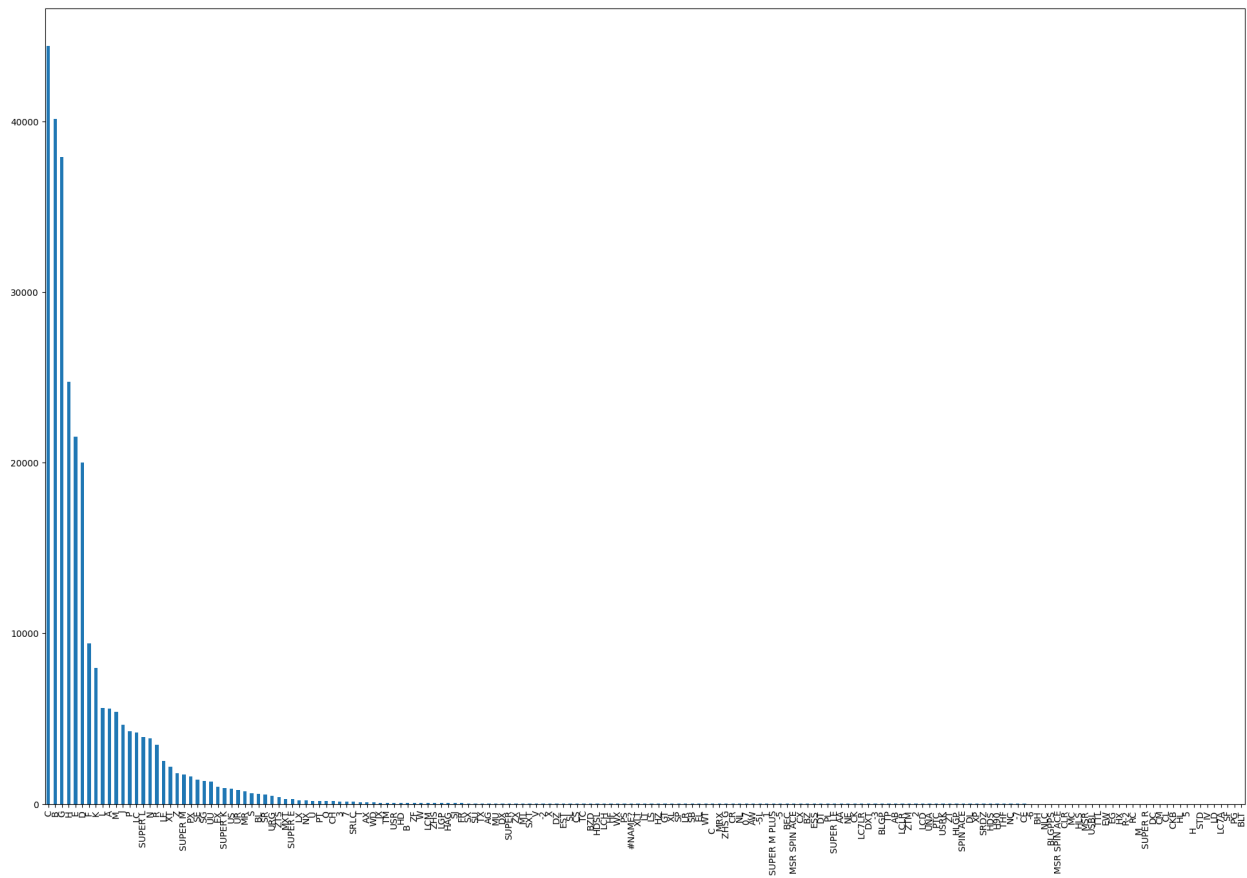
...

```

LD      1
LC7A    1
SF      1
PG      1
BLT     1

```

Name: Secondary Description, Length: 177, dtype: int64



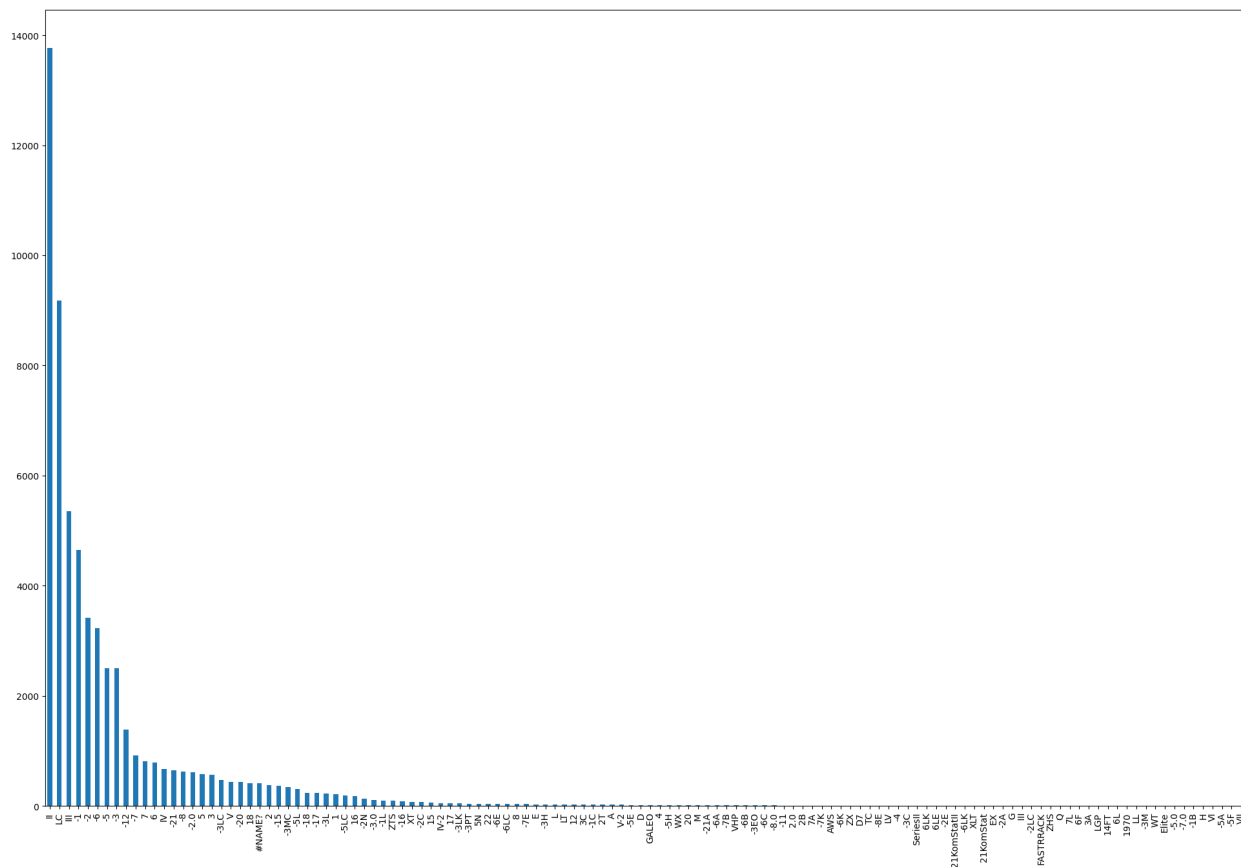
Model Series - 58667 / 412698

```
-----  
II      13770  
LC      9175  
III     5351  
-1      4646  
-2      3421
```

...

```
H        1  
VI        1  
-5A       1  
-5F       1  
VII       1
```

Name: Model Series, Length: 126, dtype: int64



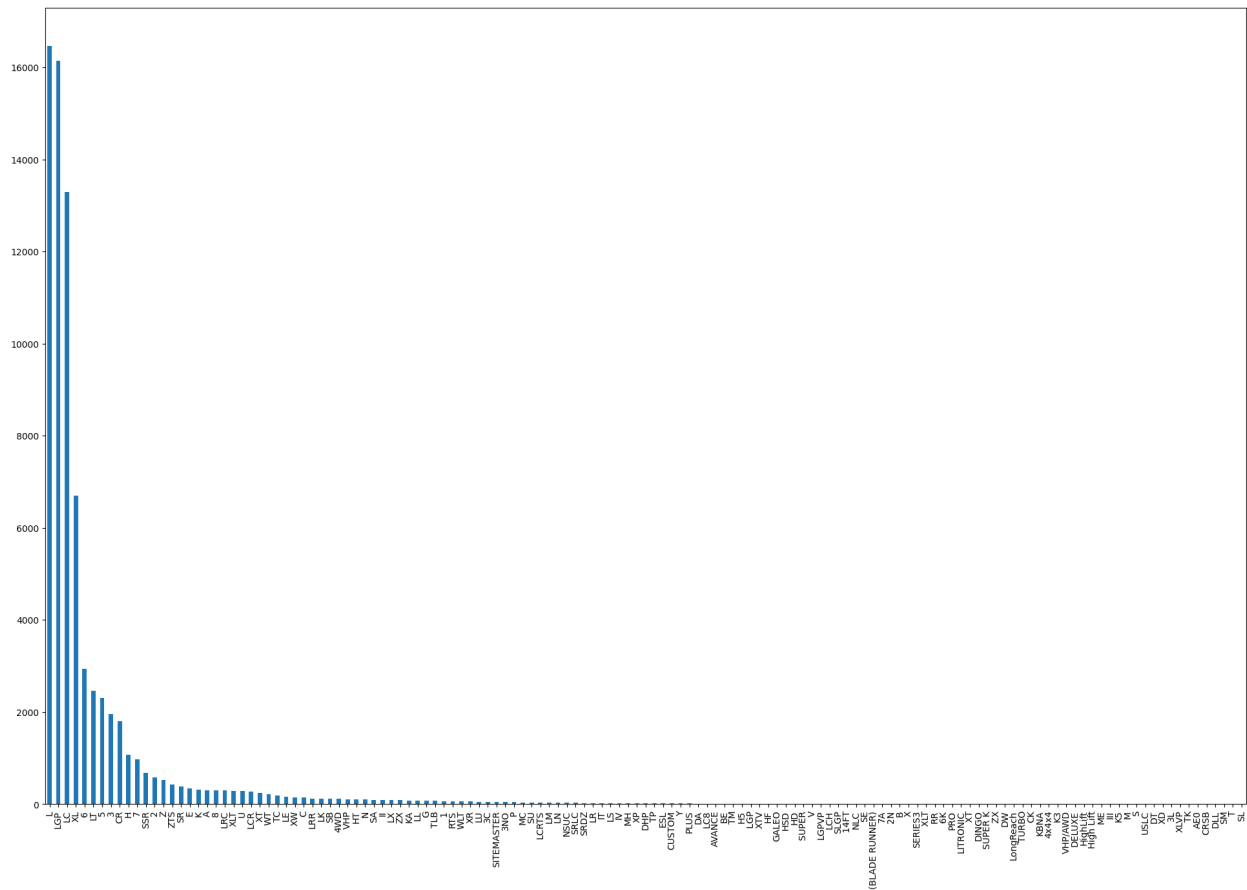


Model Descriptor - 74816 / 412698

-----  
L 16464  
LGP 16143  
LC 13295  
XL 6700  
6 2944

...  
CRSB 1  
DLL 1  
SM 1  
T 1  
SL 1

Name: Model Descriptor, Length: 137, dtype: int64



Machine Size - 196093 / 412698

-----  
Medium 64342

Large / Medium 51297

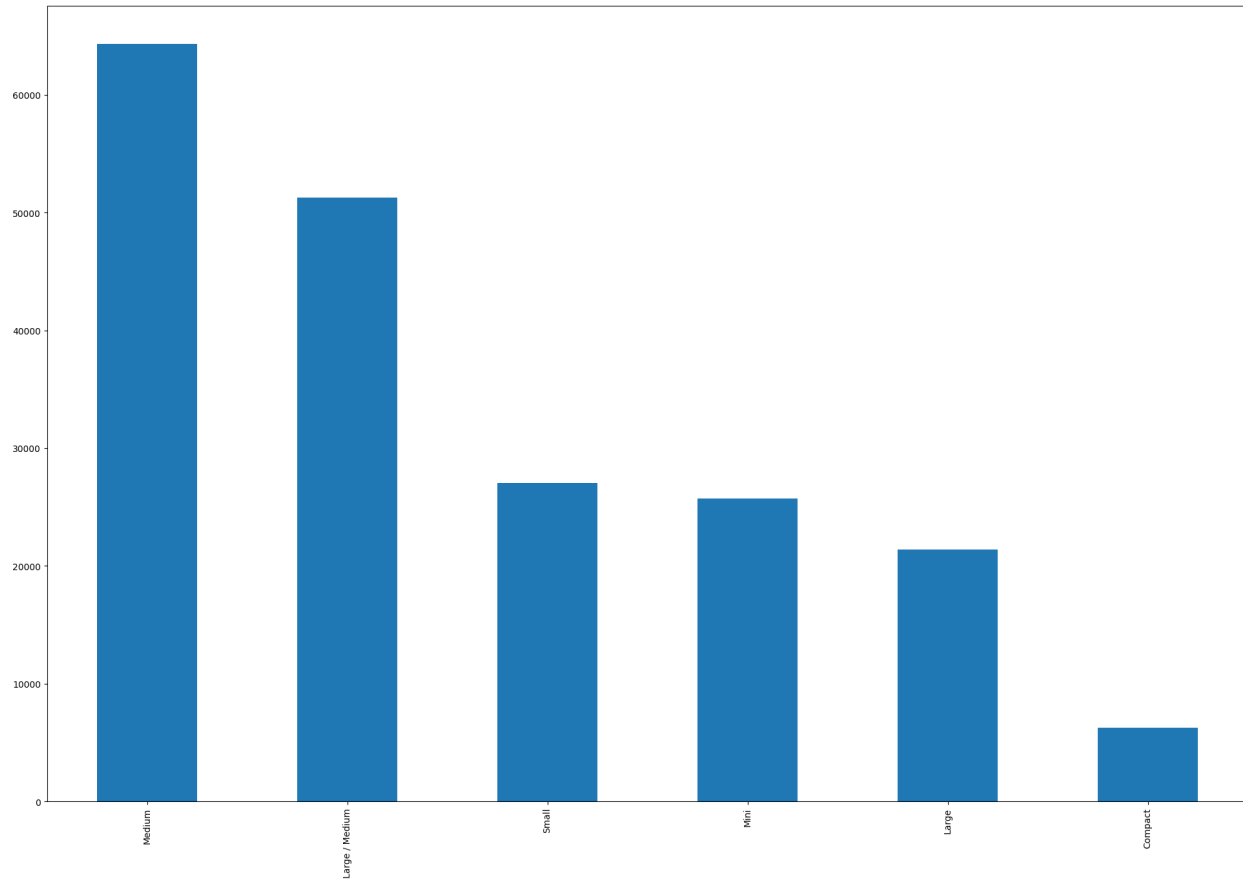
Small 27057

Mini 25721

Large 21396

Compact 6280

Name: Machine Size, dtype: int64



# Product Class Description - 412698 / 412698

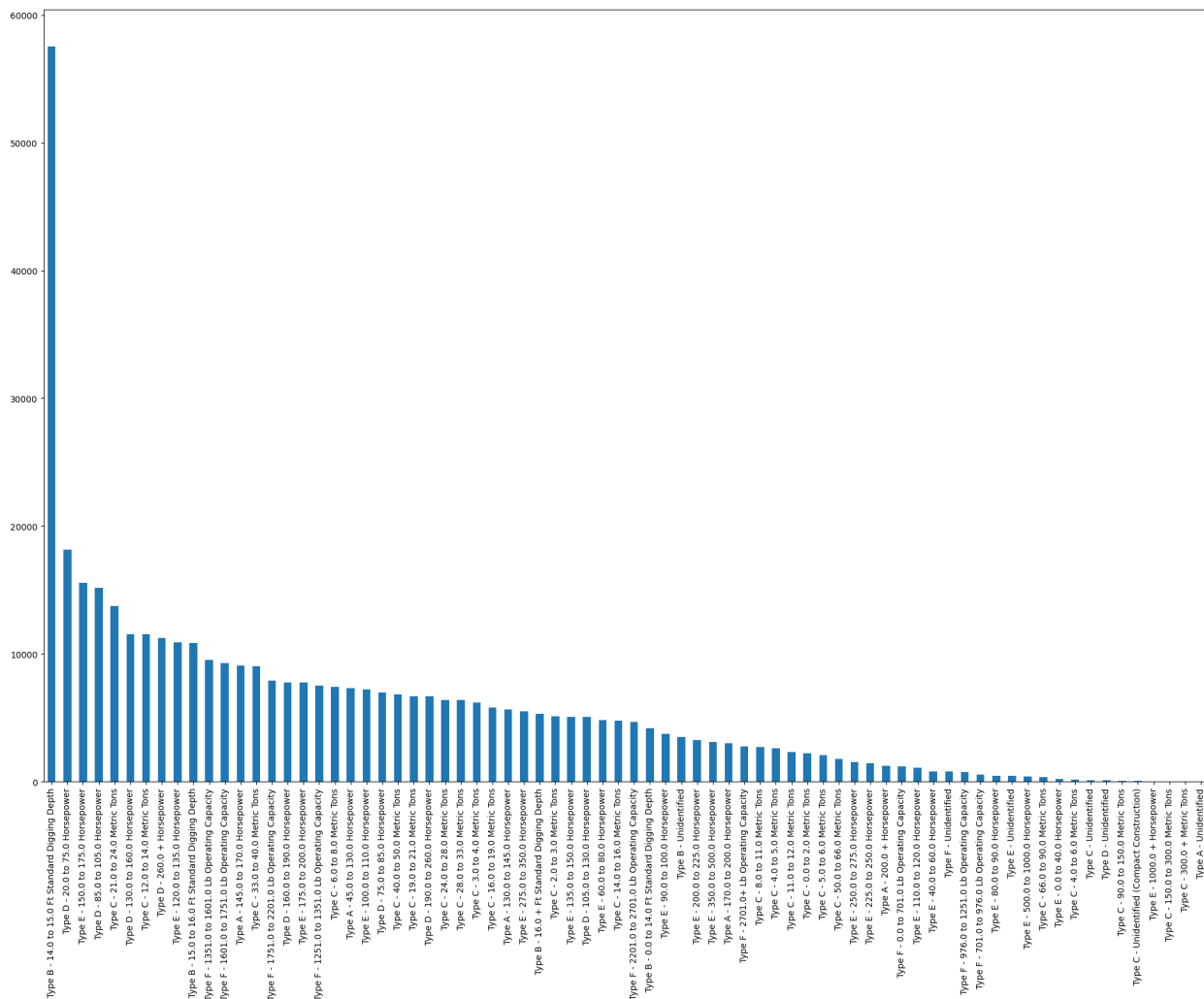
-----

Type B - 14.0 to 15.0 Ft Standard Digging Depth	57542
Type D - 20.0 to 75.0 Horsepower	18131
Type E - 150.0 to 175.0 Horsepower	15537
Type D - 85.0 to 105.0 Horsepower	15161
Type C - 21.0 to 24.0 Metric Tons	13736

...

Type C - Unidentified (Compact Construction)	38
Type E - 1000.0 + Horsepower	25
Type C - 150.0 to 300.0 Metric Tons	21
Type C - 300.0 + Metric Tons	1
Type A - Unidentified	1

Name: Product Class Description, Length: 74, dtype: int64

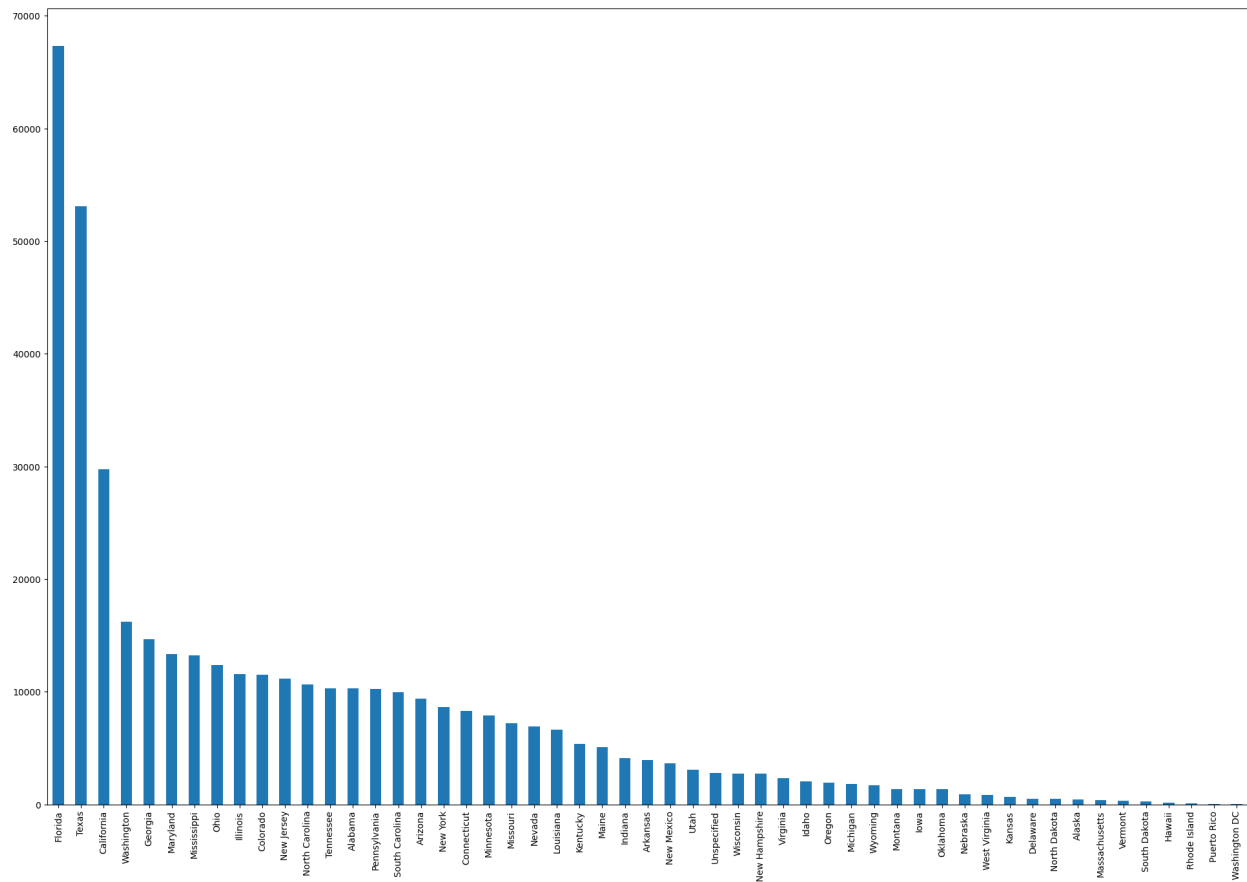


State of Usage - 412698 / 412698

-----  
Florida 67320  
Texas 53110  
California 29761  
Washington 16222  
Georgia 14633  
Maryland 13322  
Mississippi 13240  
Ohio 12369  
Illinois 11540  
Colorado 11529  
New Jersey 11156  
North Carolina 10636  
Tennessee 10298  
Alabama 10292  
Pennsylvania 10234  
South Carolina 9951  
Arizona 9364  
New York 8639  
Connecticut 8276  
Minnesota 7885  
Missouri 7178  
Nevada 6932  
Louisiana 6627  
Kentucky 5351  
Maine 5096  
Indiana 4124  
Arkansas 3933  
New Mexico 3631  
Utah 3046  
Unspecified 2801  
Wisconsin 2745  
New Hampshire 2738  
Virginia 2353  
Idaho 2025  
Oregon 1911  
Michigan 1831  
Wyoming 1672  
Montana 1336  
Iowa 1336  
Oklahoma 1326

Nebraska	866
West Virginia	840
Kansas	667
Delaware	510
North Dakota	480
Alaska	430
Massachusetts	347
Vermont	300
South Dakota	244
Hawaii	118
Rhode Island	83
Puerto Rico	42
Washington DC	2

Name: State of Usage, dtype: int64



Product Group - 412698 / 412698

-----  
TEX 104230

TTT 82582

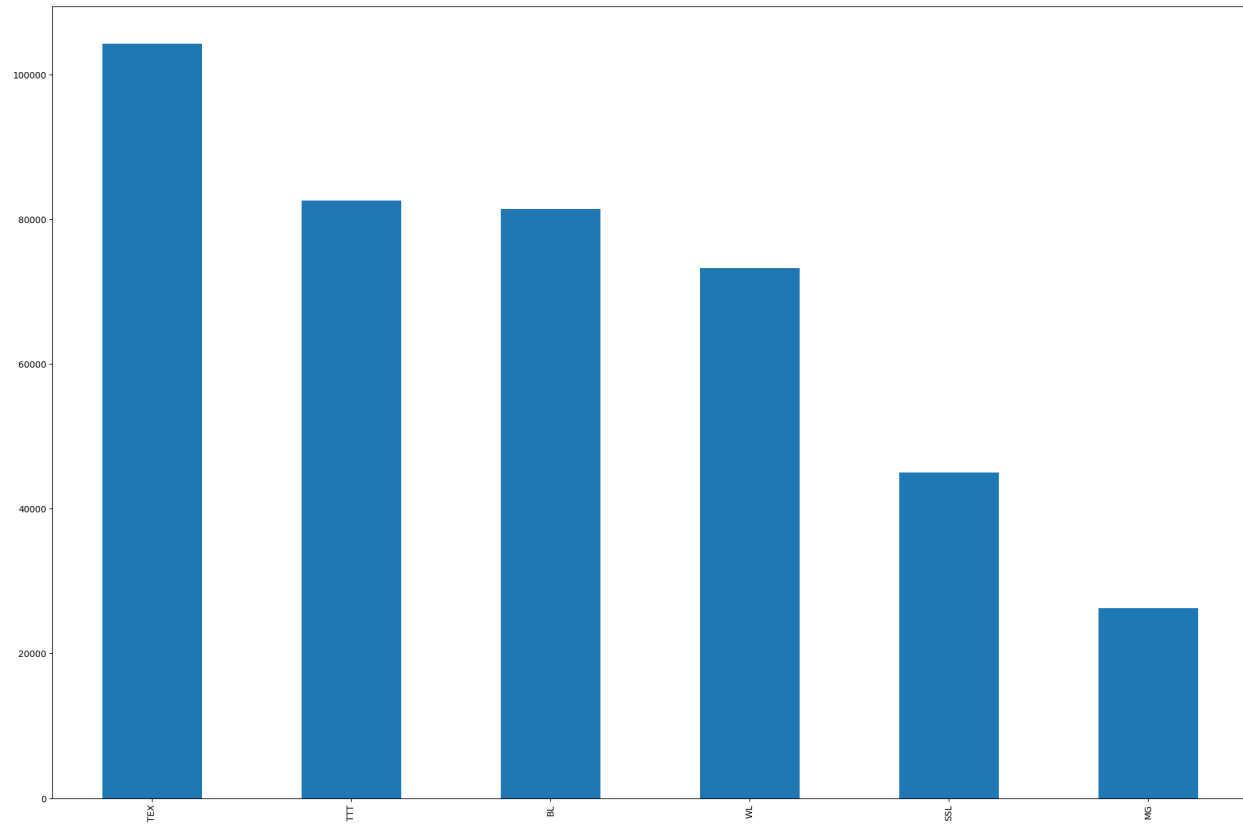
BL 81401

WL 73216

SSL 45011

MG 26258

Name: Product Group, dtype: int64



Product Group Description - 412698 / 412698

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UK 104230

Japan 82582

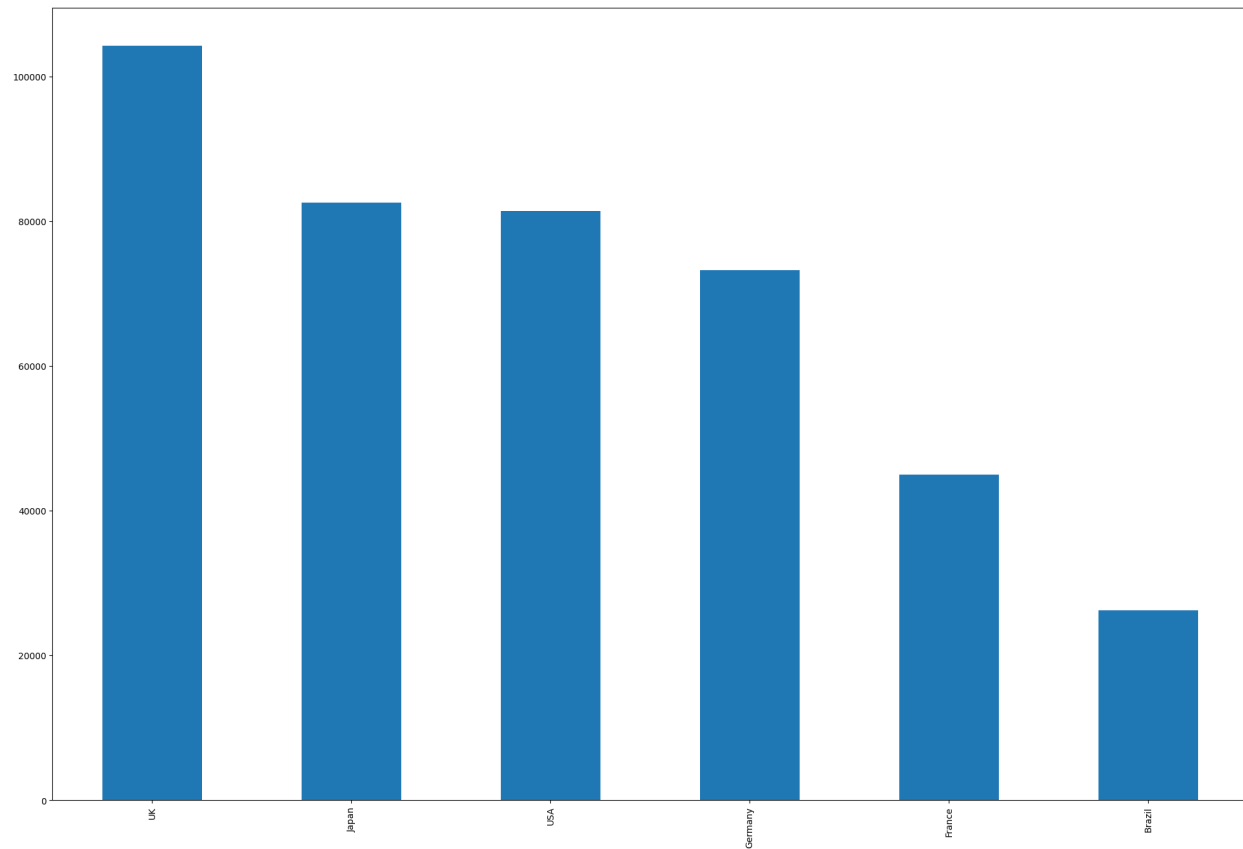
USA 81401

Germany 73216

France 45011

Brazil 26258

Name: Product Group Description, dtype: int64



Driver System - 107087 / 412698

-----

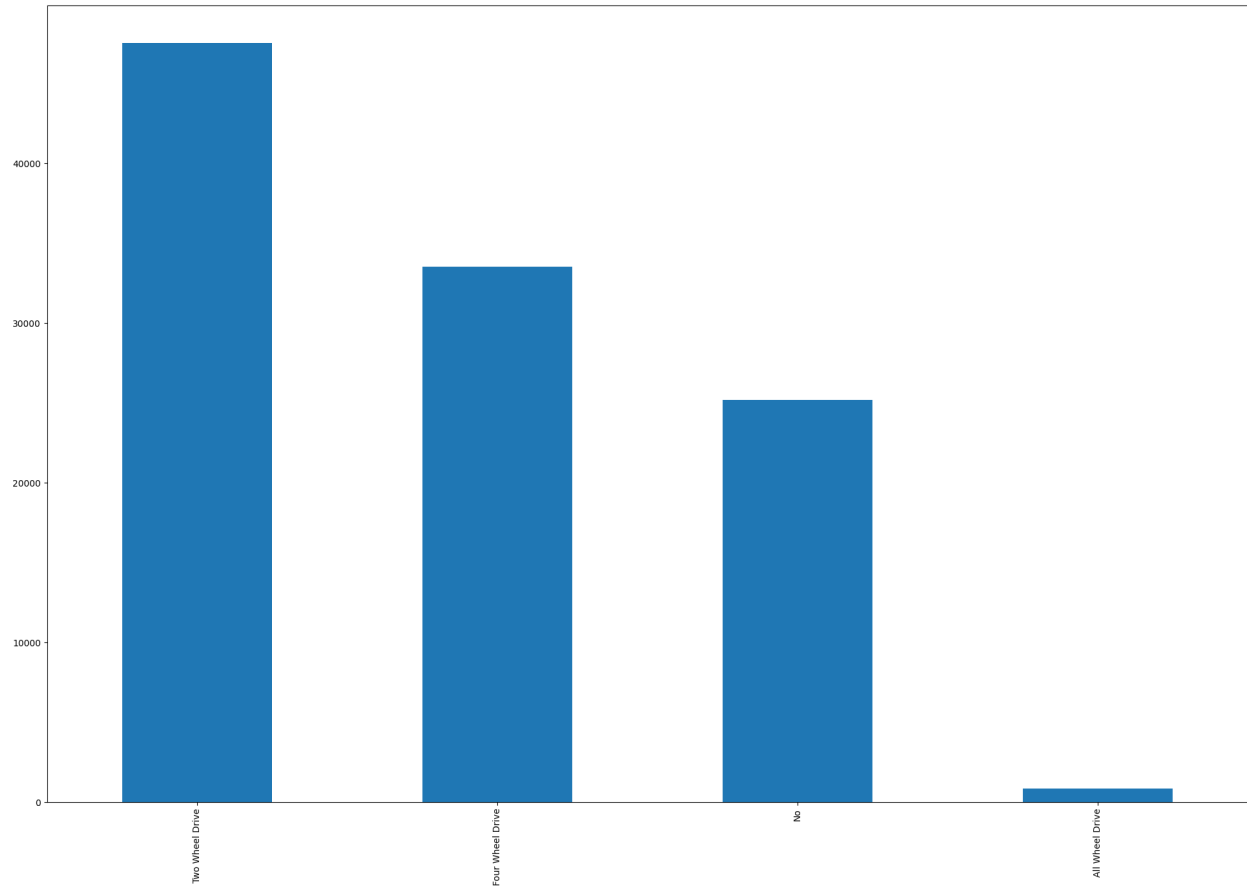
Two Wheel Drive 47546

Four Wheel Drive 33551

No 25166

All Wheel Drive 824

Name: Driver System, dtype: int64





Enclosure - 412364 / 412698

-----

OROPS 177971

EROPS 141769

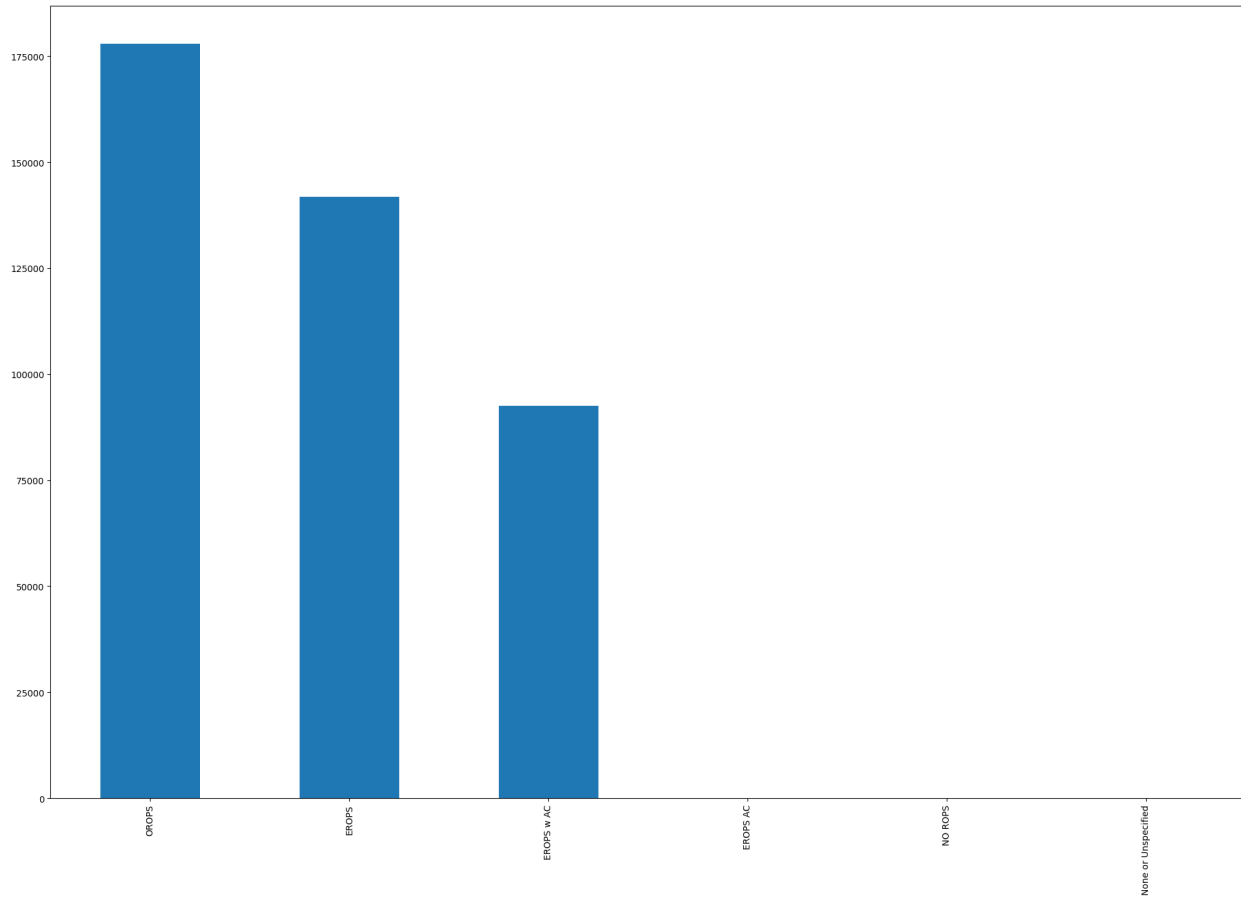
EROPS w AC 92601

EROPS AC 18

NO ROPS 3

None or Unspecified 2

Name: Enclosure, dtype: int64



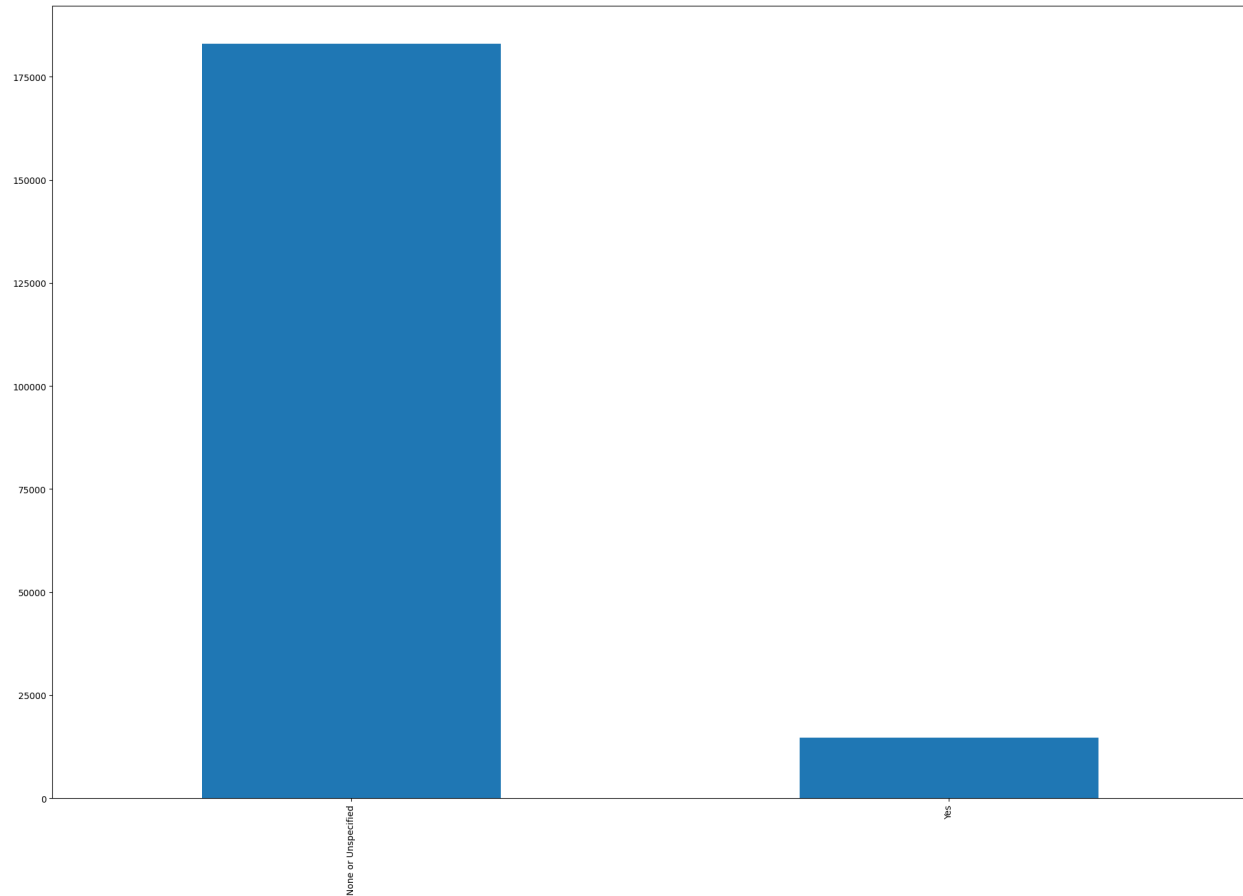
Control - 197715 / 412698

-----

None or Unspecified 183061

Yes 14654

Name: Control, dtype: int64



Touchpad Type - 81096 / 412698

-----

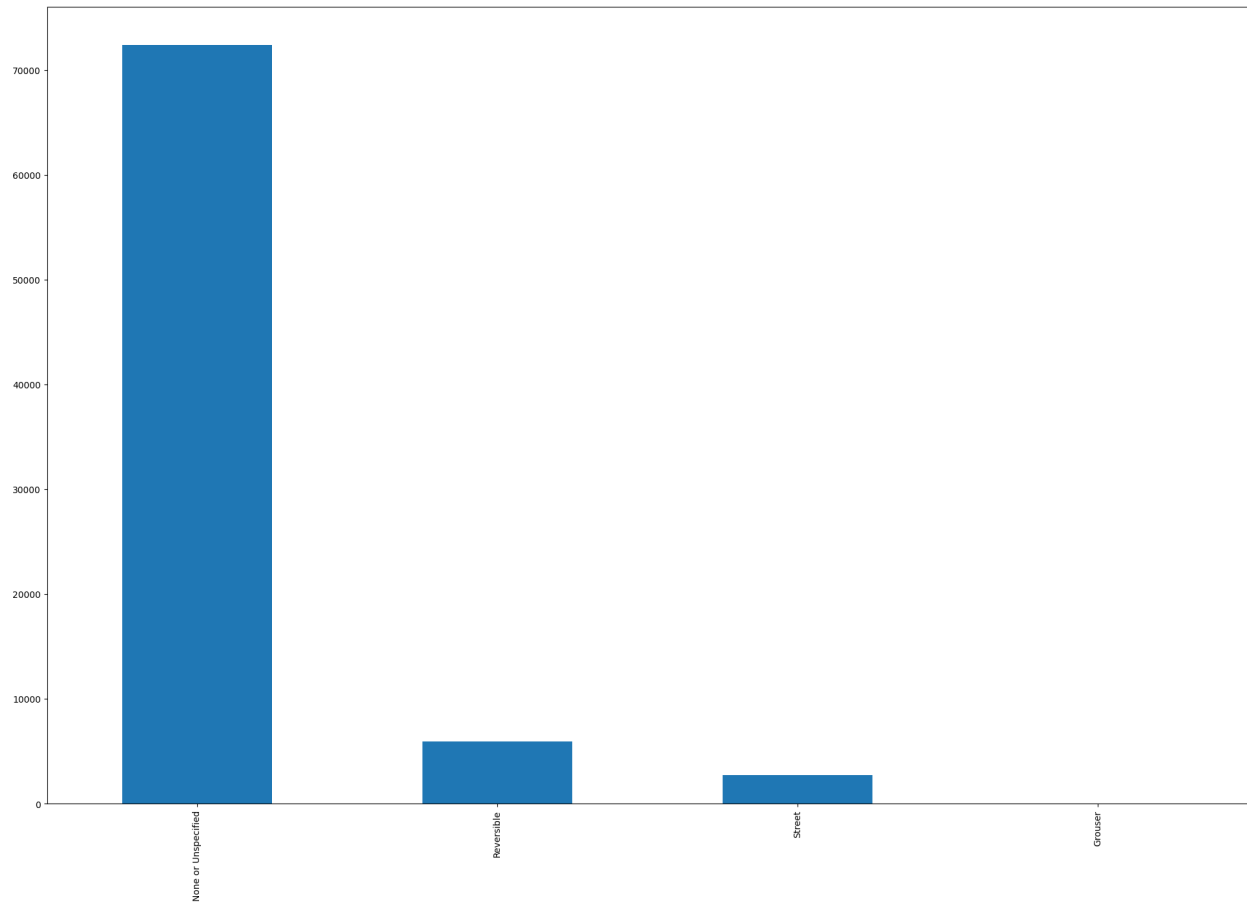
None or Unspecified 72395

Reversible 5950

Street 2725

Grouser 26

Name: Touchpad Type, dtype: int64



Control Type - 152728 / 412698

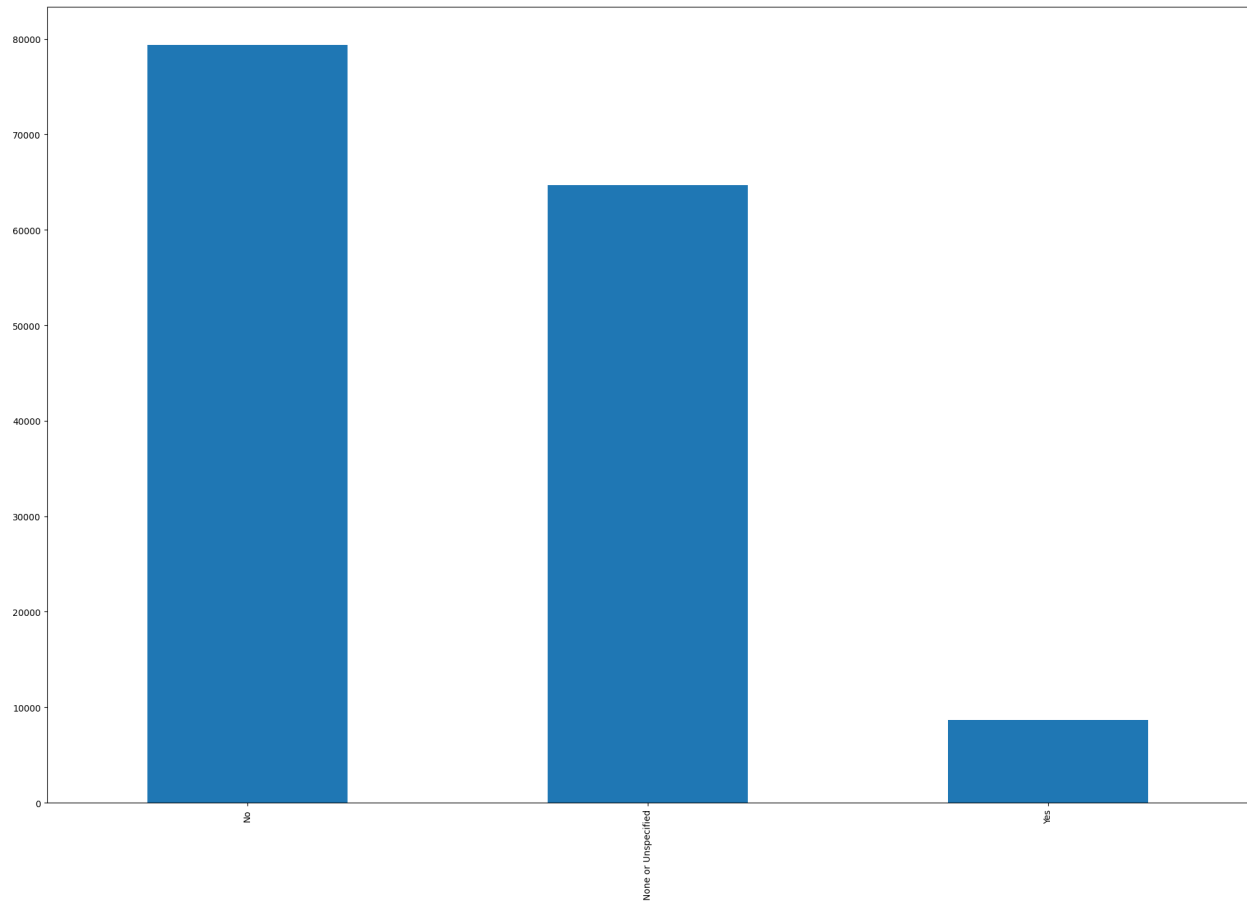
-----

No 79389

None or Unspecified 64693

Yes 8646

Name: Control Type, dtype: int64



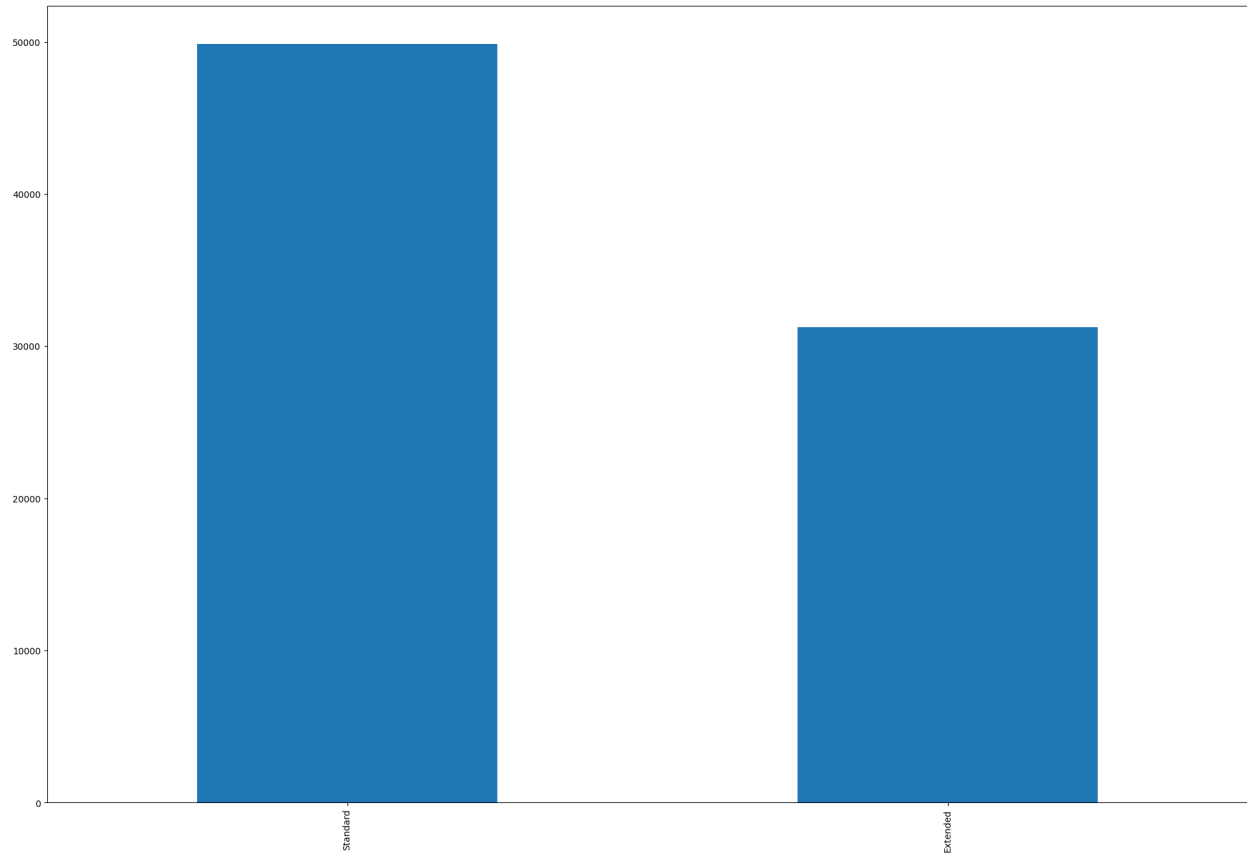
Version - 81096 / 412698

-----

Standard 49854

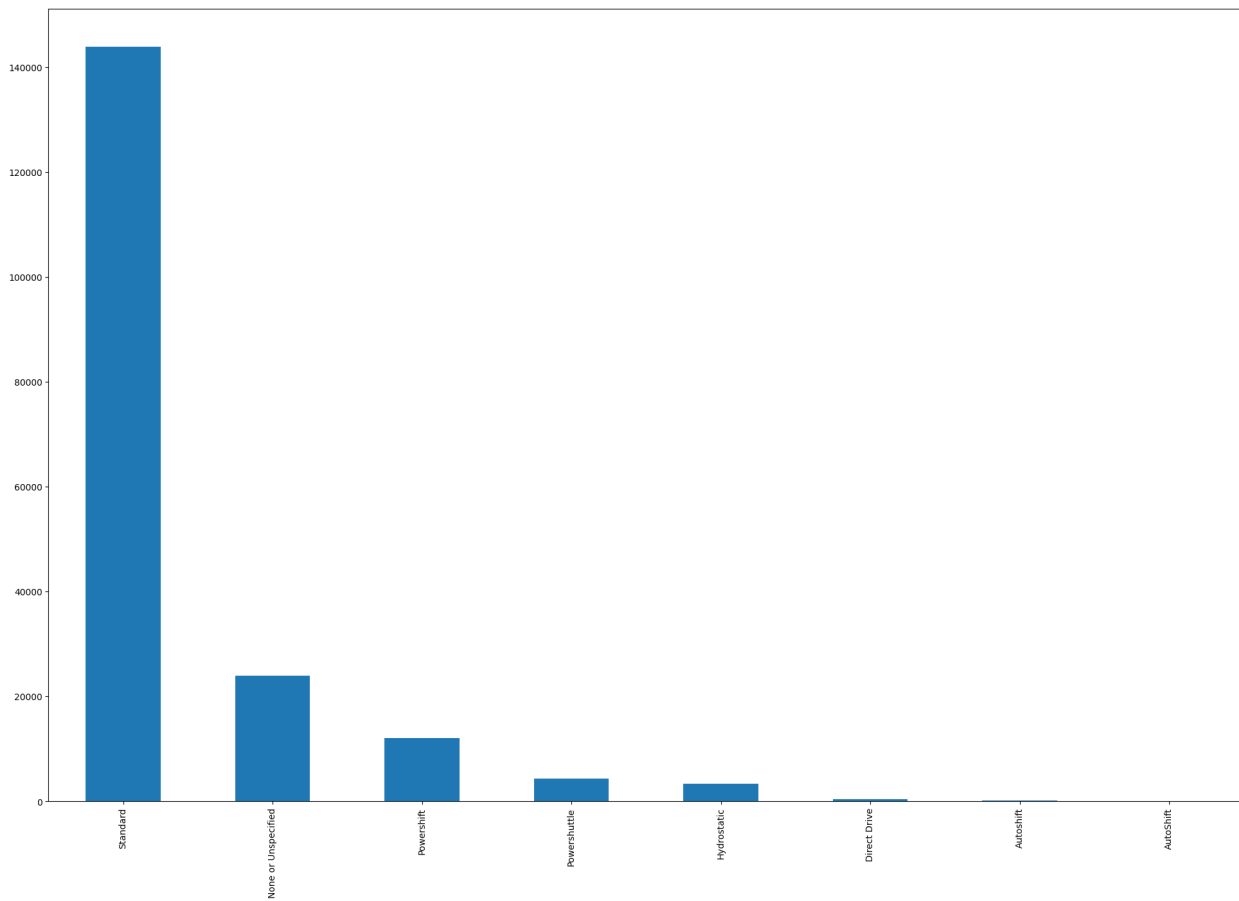
Extended 31242

Name: Version, dtype: int64



Transmission - 188007 / 412698

-----  
Standard 143915  
None or Unspecified 23889  
Powershift 11991  
Powershuttle 4286  
Hydrostatic 3342  
Direct Drive 422  
Autoshift 118  
AutoShift 44  
Name: Transmission, dtype: int64



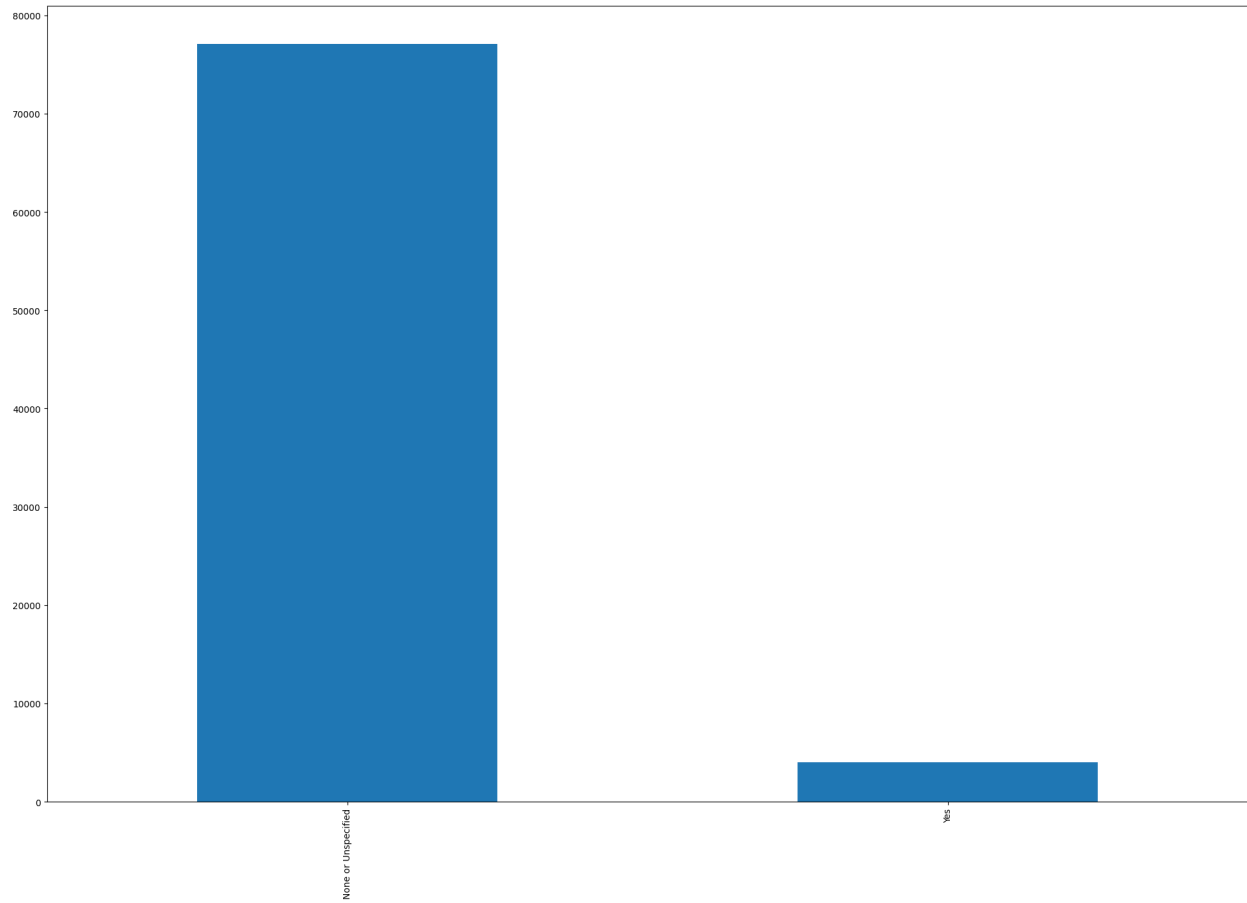
Turbo Charged - 81096 / 412698

-----

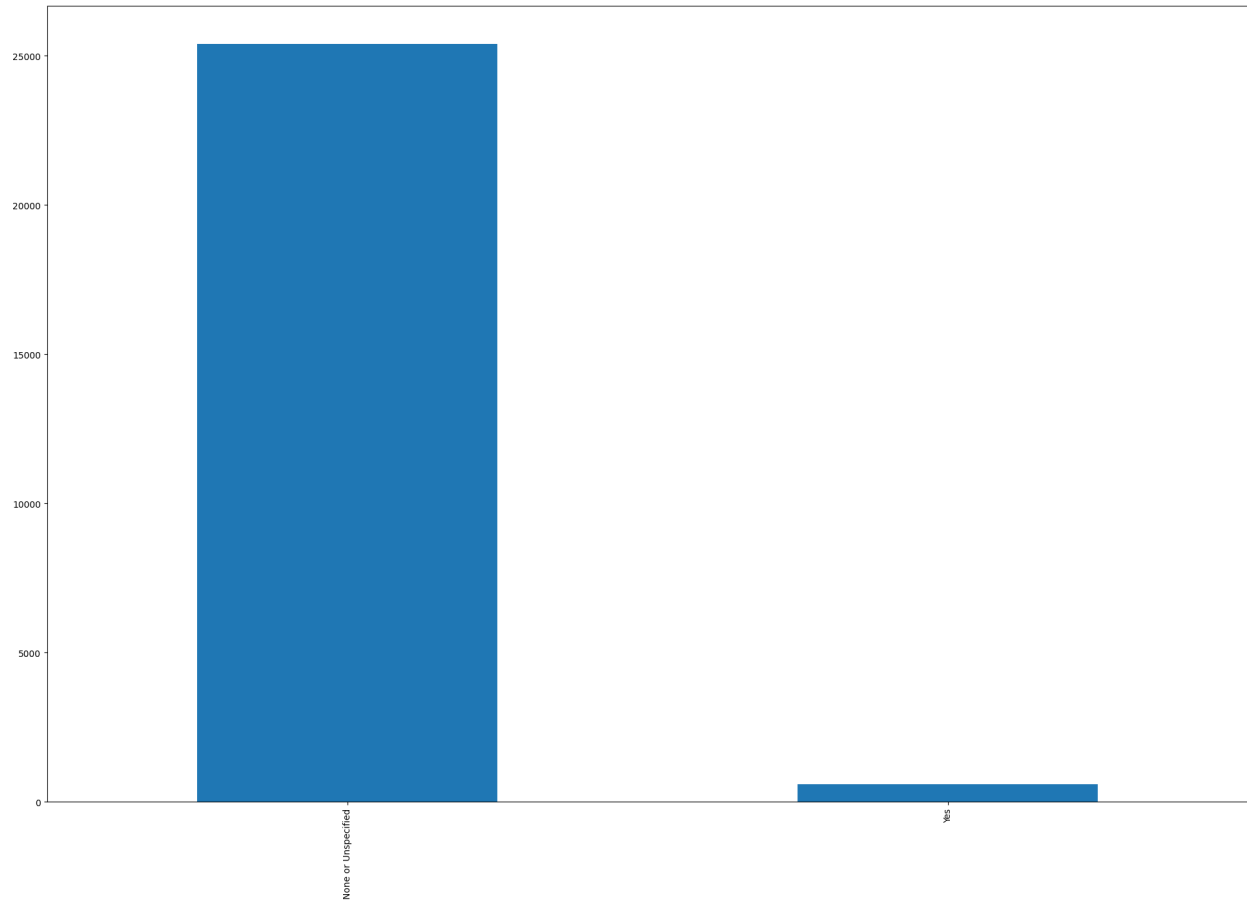
None or Unspecified 77111

Yes 3985

Name: Turbo Charged, dtype: int64



```
Extra features - 25983 / 412698
-----
None or Unspecified 25406
Yes 577
Name: Extra features, dtype: int64
```





Machine Width - 25983 / 412698

-----

14' 9867

None or Unspecified 9521

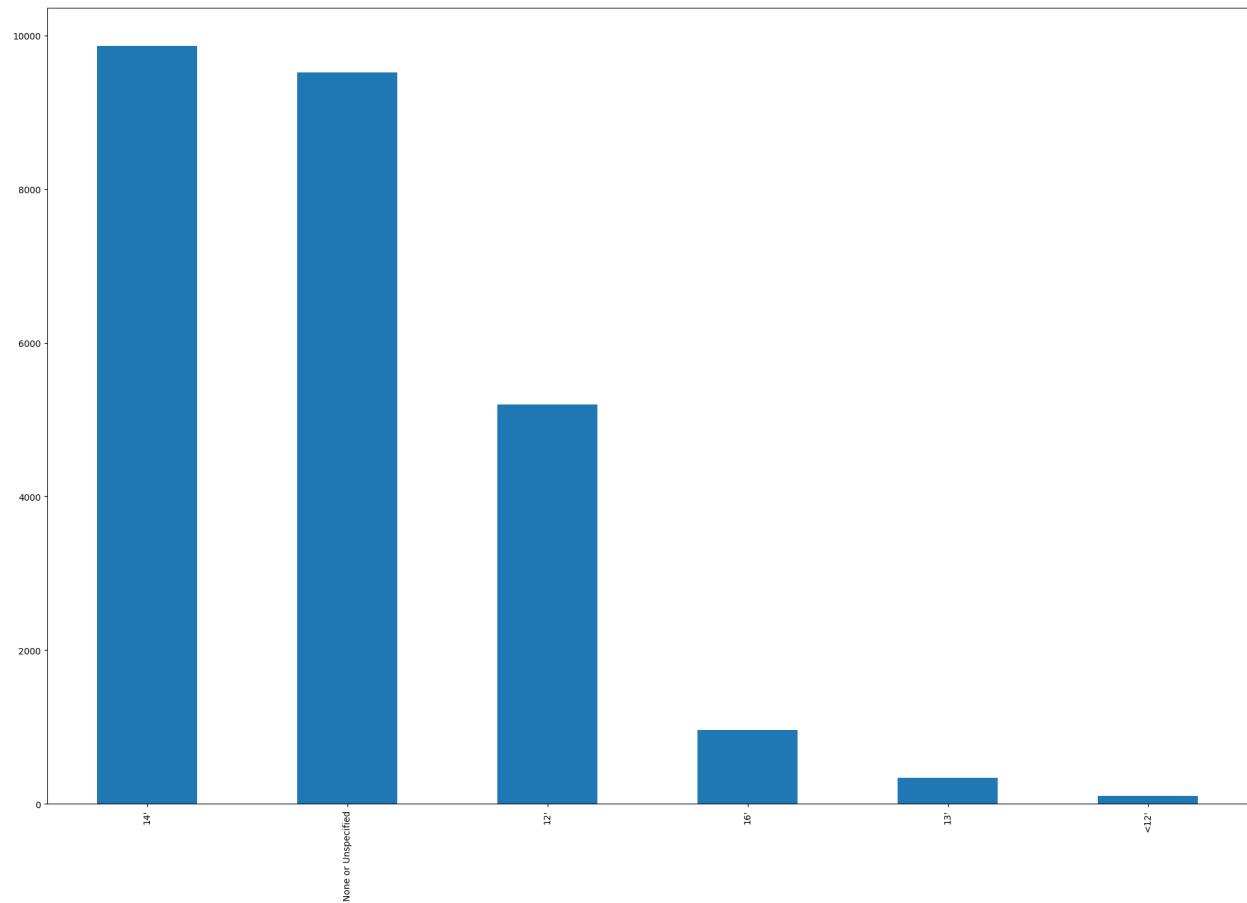
12' 5201

16' 960

13' 335

<12' 99

Name: Machine Width, dtype: int64



Clean Room - 25983 / 412698

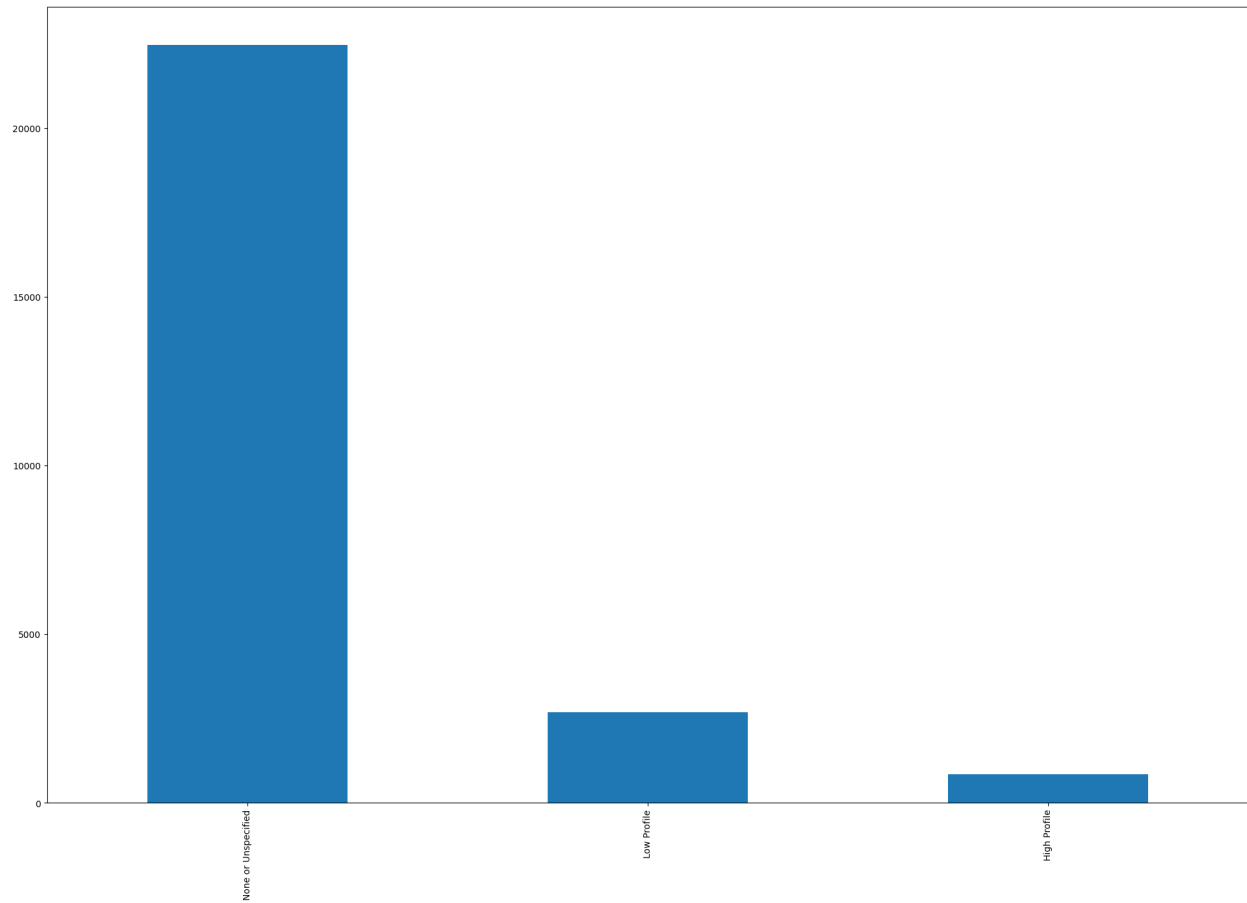
-----

None or Unspecified 22469

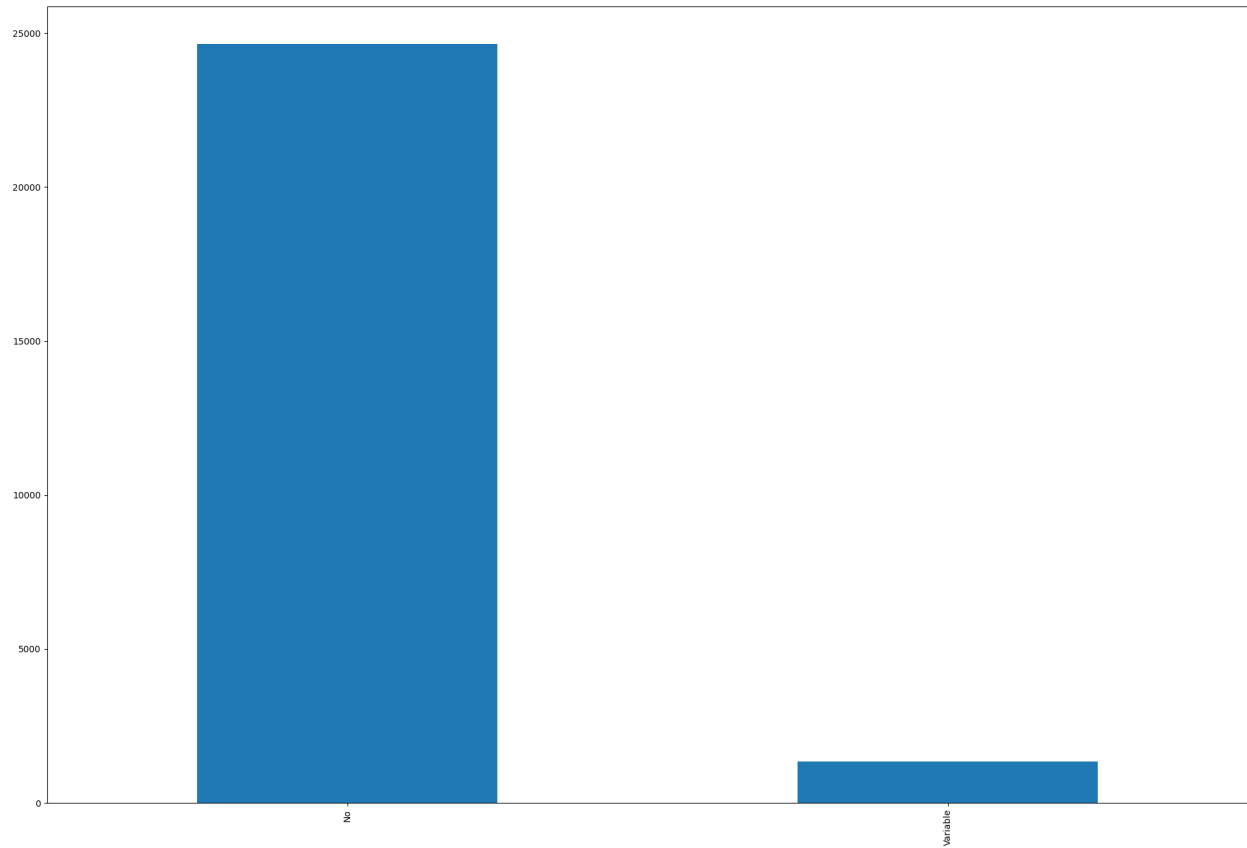
Low Profile 2675

High Profile 839

Name: Clean Room, dtype: int64

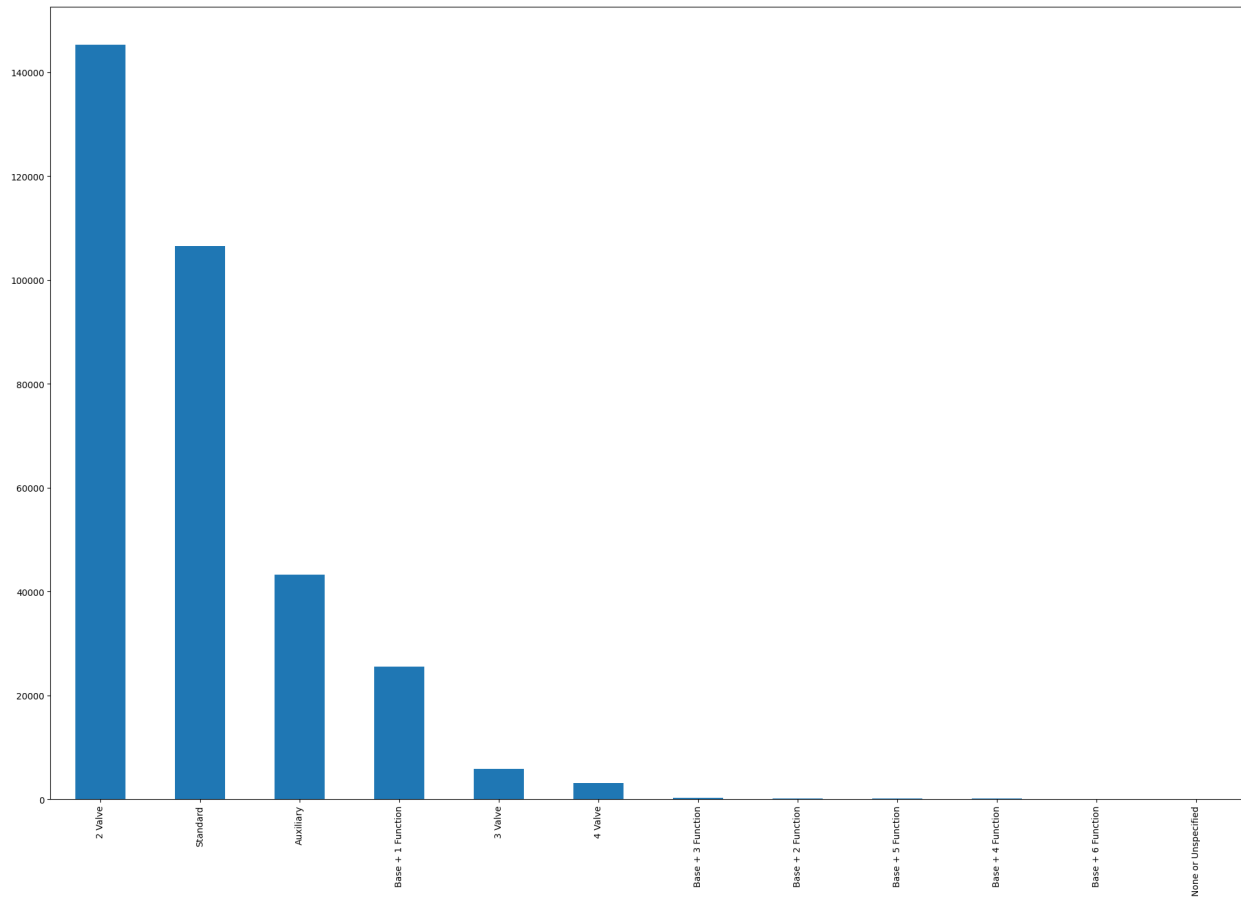


```
Engine Horsepower - 25983 / 412698
-----
No          24642
Variable    1341
Name: Engine Horsepower, dtype: int64
```



Hydraulics - 330133 / 412698

```
-----
2 Valve                145317
Standard              106515
Auxiliary              43224
Base + 1 Function      25511
3 Valve                5807
4 Valve                3077
Base + 3 Function        311
Base + 2 Function       132
Base + 5 Function        94
Base + 4 Function        81
Base + 6 Function        54
None or Unspecified     10
Name: Hydraulics, dtype: int64
```



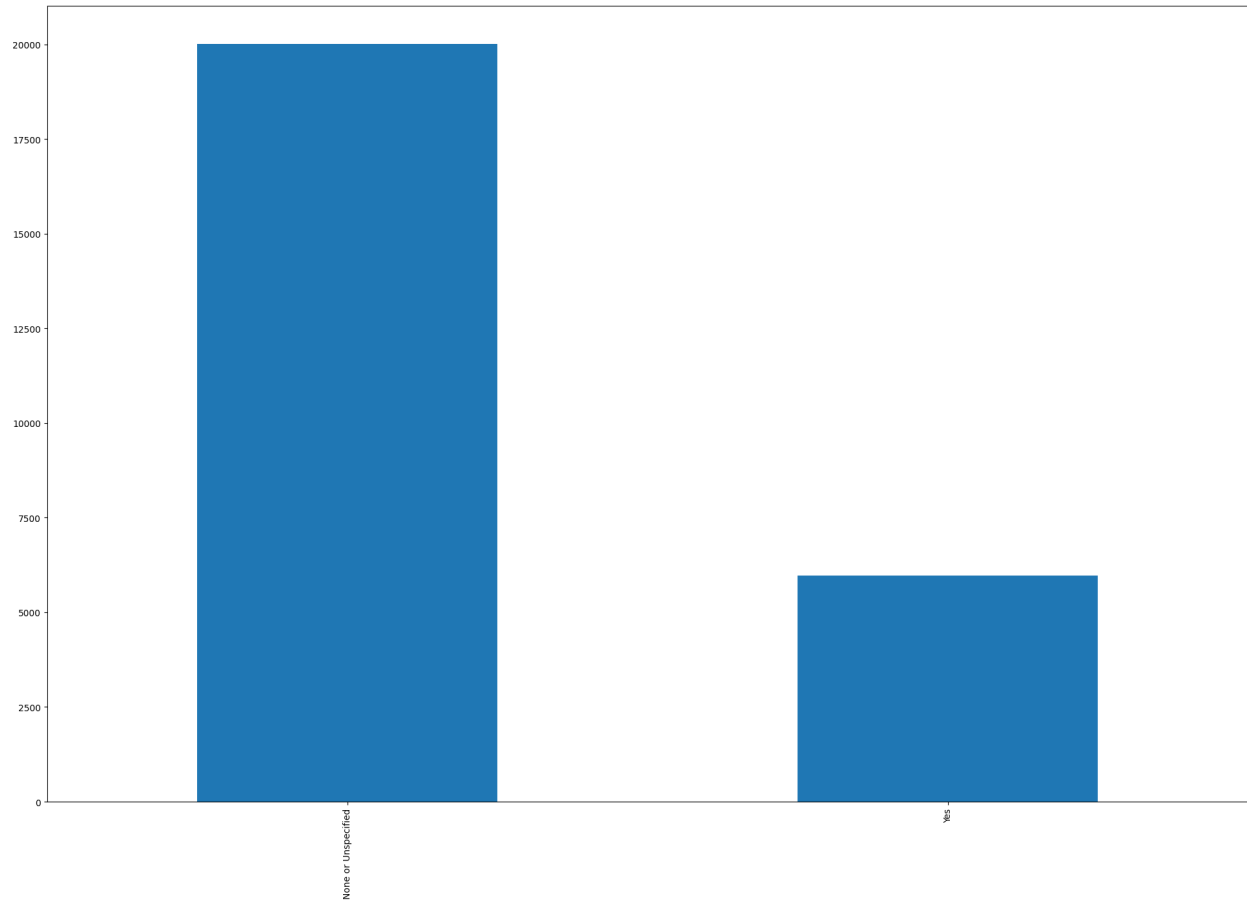
Push Block - 25983 / 412698

-----

None or Unspecified 20017

Yes 5966

Name: Push Block, dtype: int64



Ripper - 106945 / 412698

-----

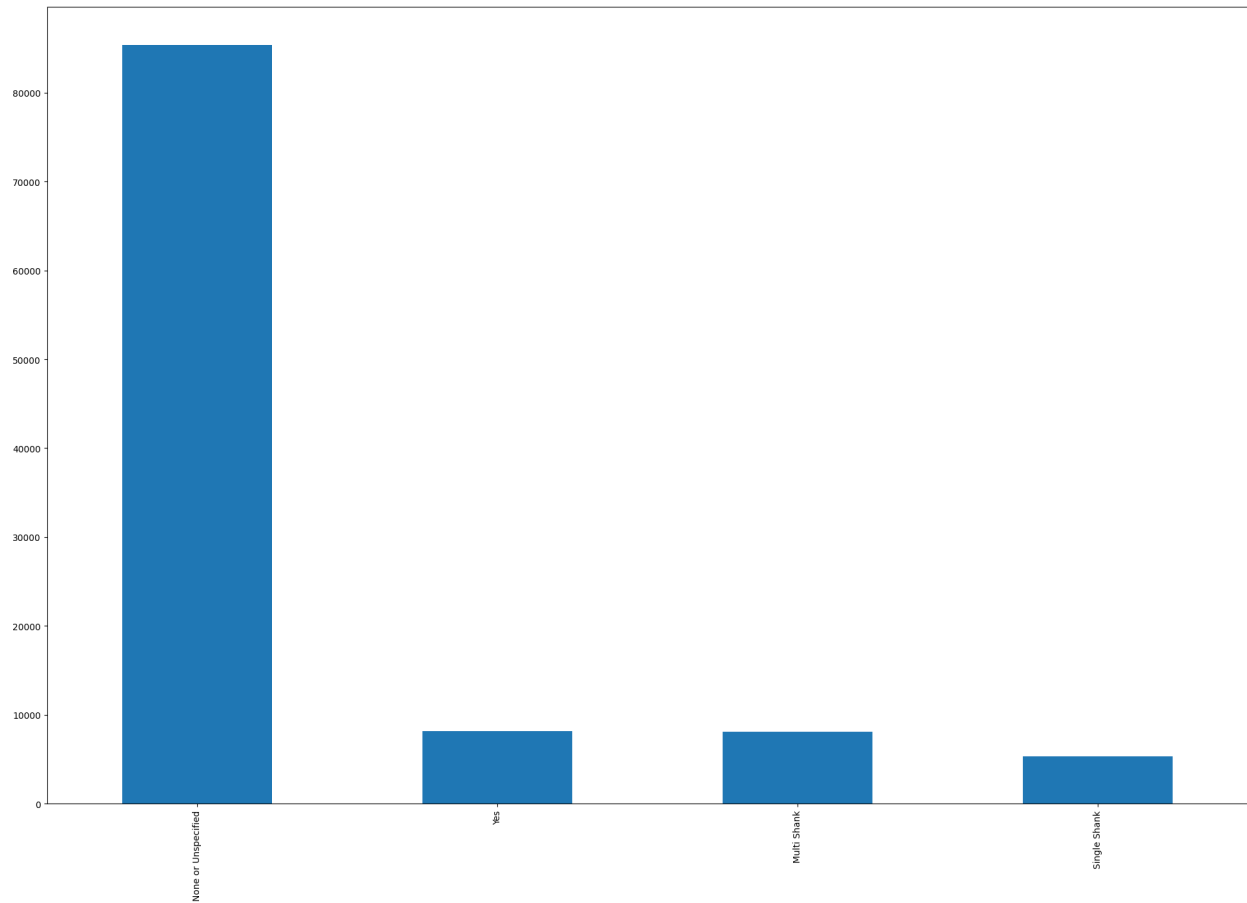
None or Unspecified 85405

Yes 8185

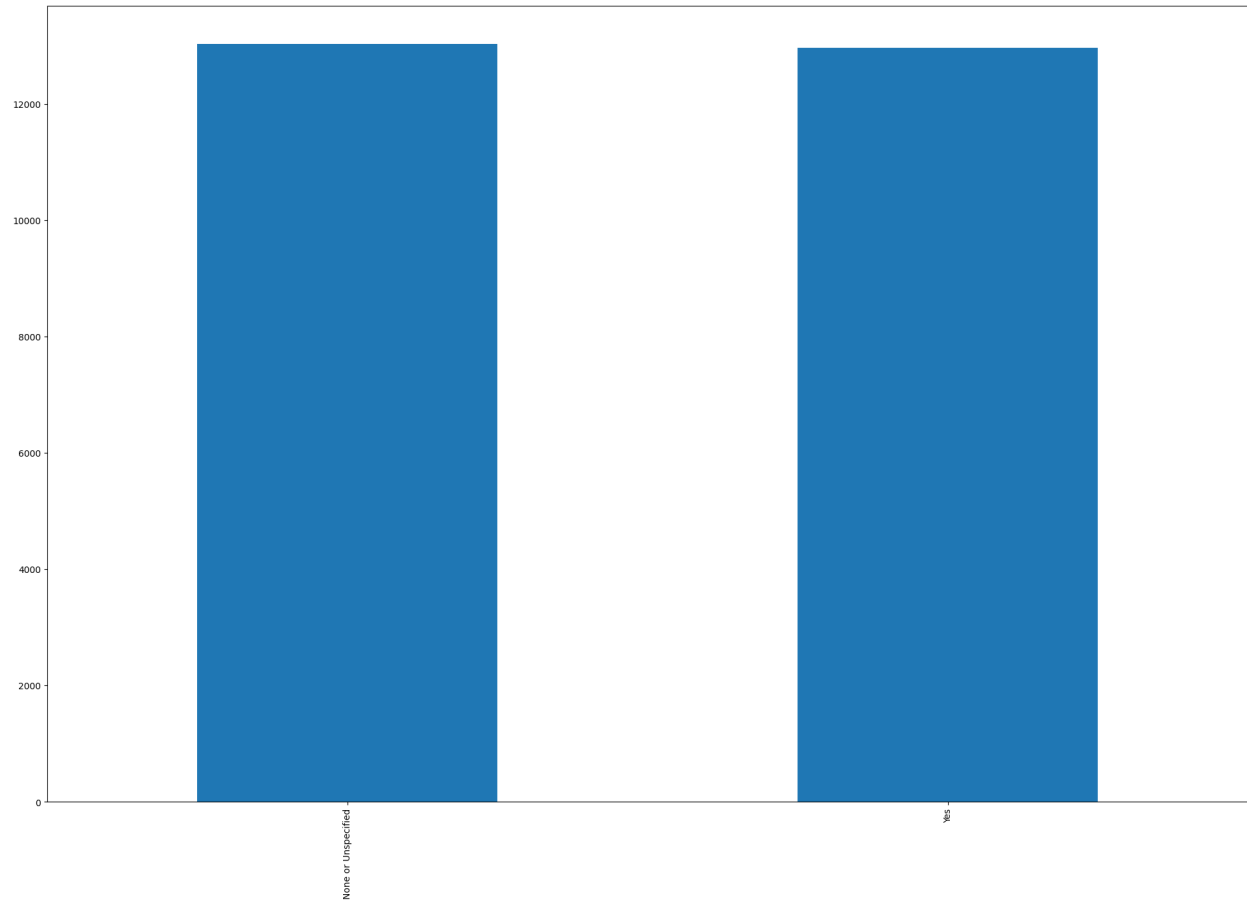
Multi Shank 8071

Single Shank 5284

Name: Ripper, dtype: int64

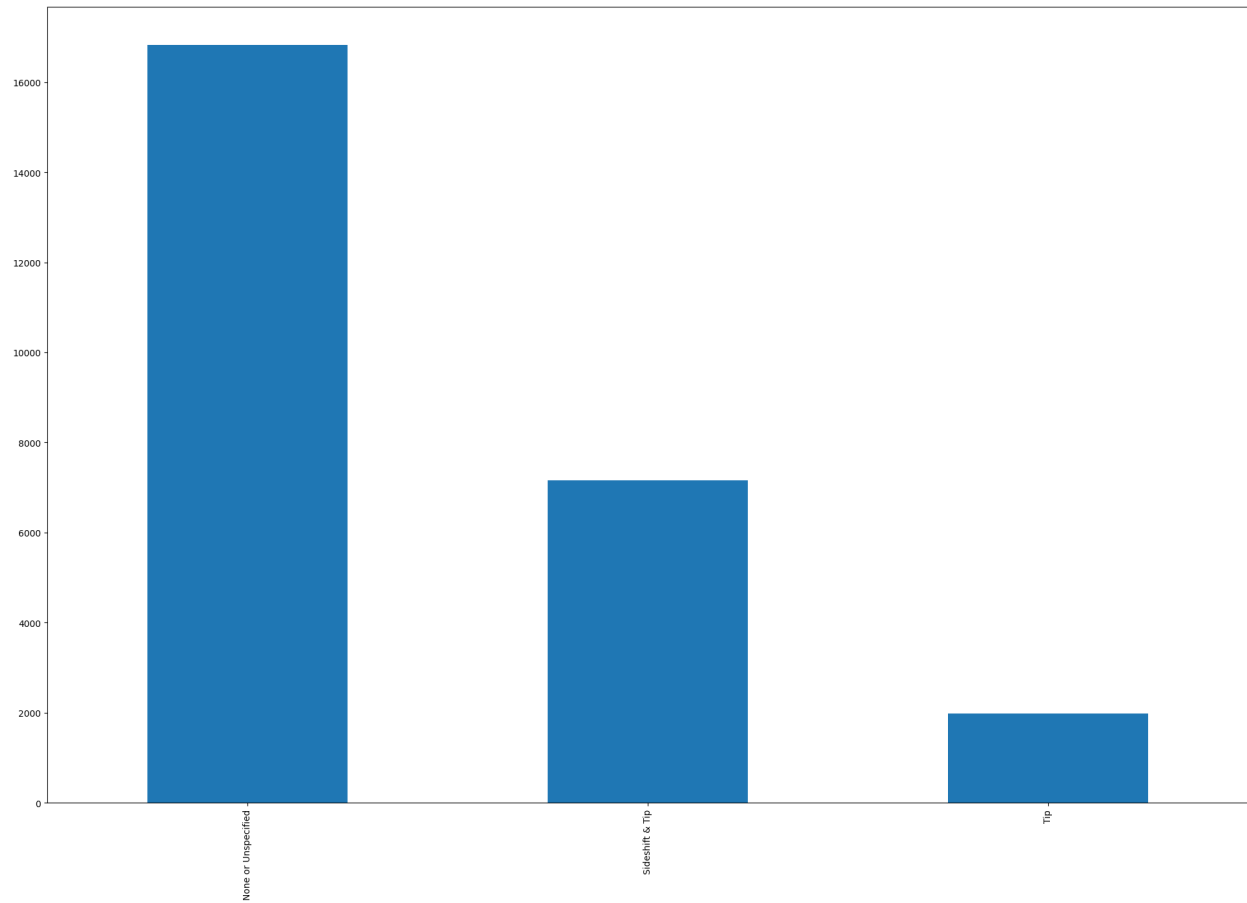


```
Scarifier - 25994 / 412698
-----
None or Unspecified 13033
Yes                  12961
Name: Scarifier, dtype: int64
```



Tip Control - 25983 / 412698

-----  
None or Unspecified 16832  
Sideshift & Tip 7164  
Tip 1987  
Name: Tip Control, dtype: int64



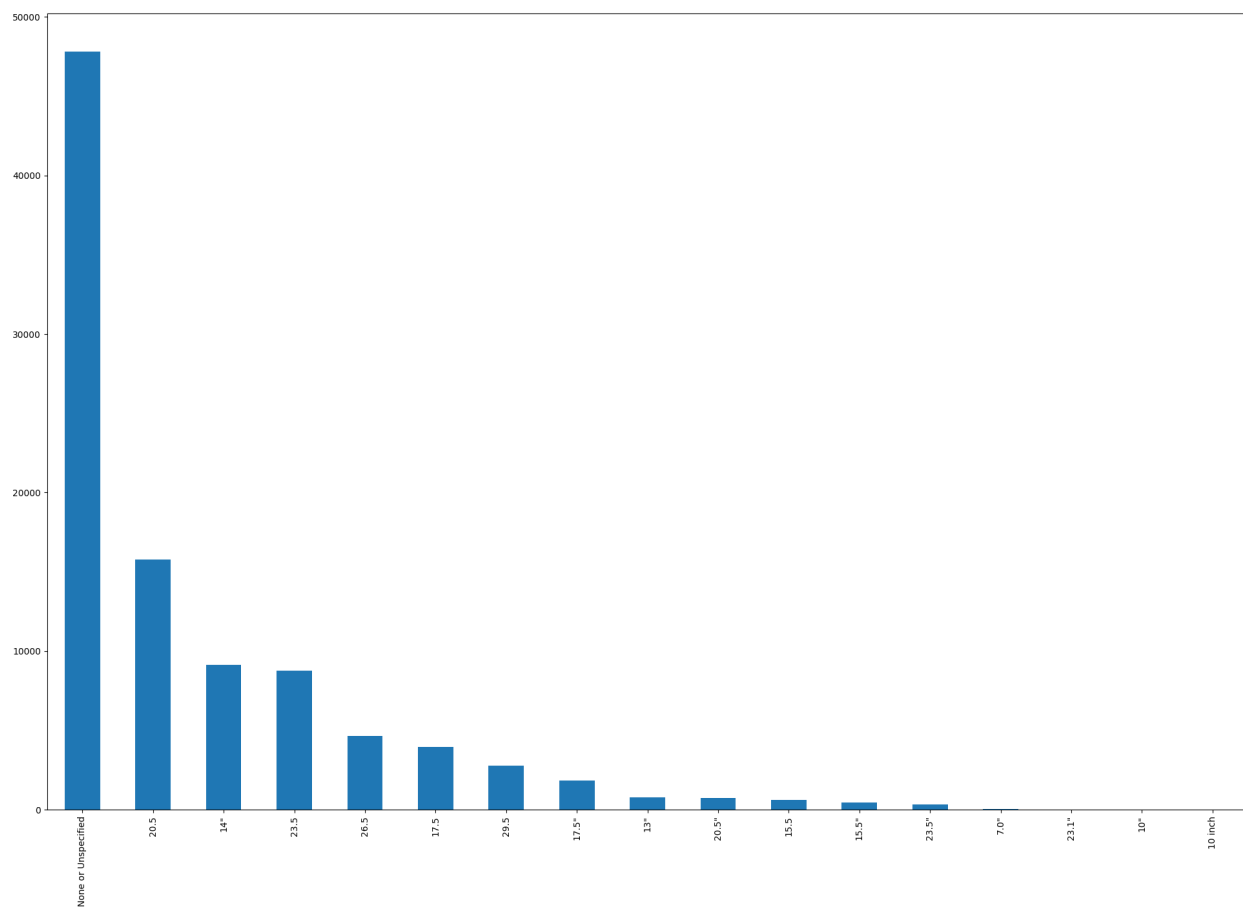


Screen Size - 97638 / 412698

-----

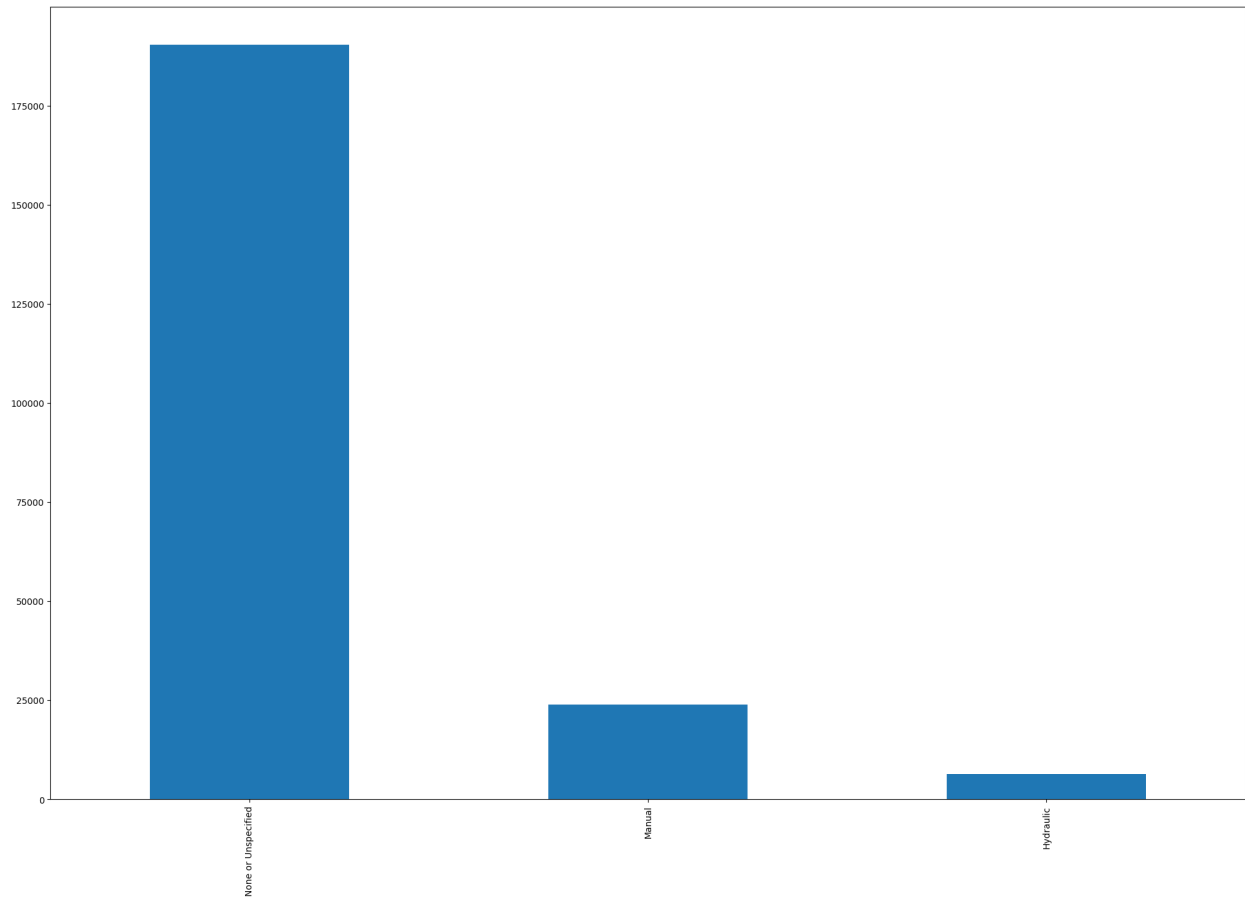
None or Unspecified	47823
20.5	15773
14"	9111
23.5	8760
26.5	4635
17.5	3971
29.5	2767
17.5"	1815
13"	776
20.5"	737
15.5	610
15.5"	463
23.5"	309
7.0"	56
23.1"	20
10"	9
10 inch	3

Name: Screen Size, dtype: int64



Coupler - 220679 / 412698

-----  
None or Unspecified 190449  
Manual 23918  
Hydraulic 6312  
Name: Coupler, dtype: int64

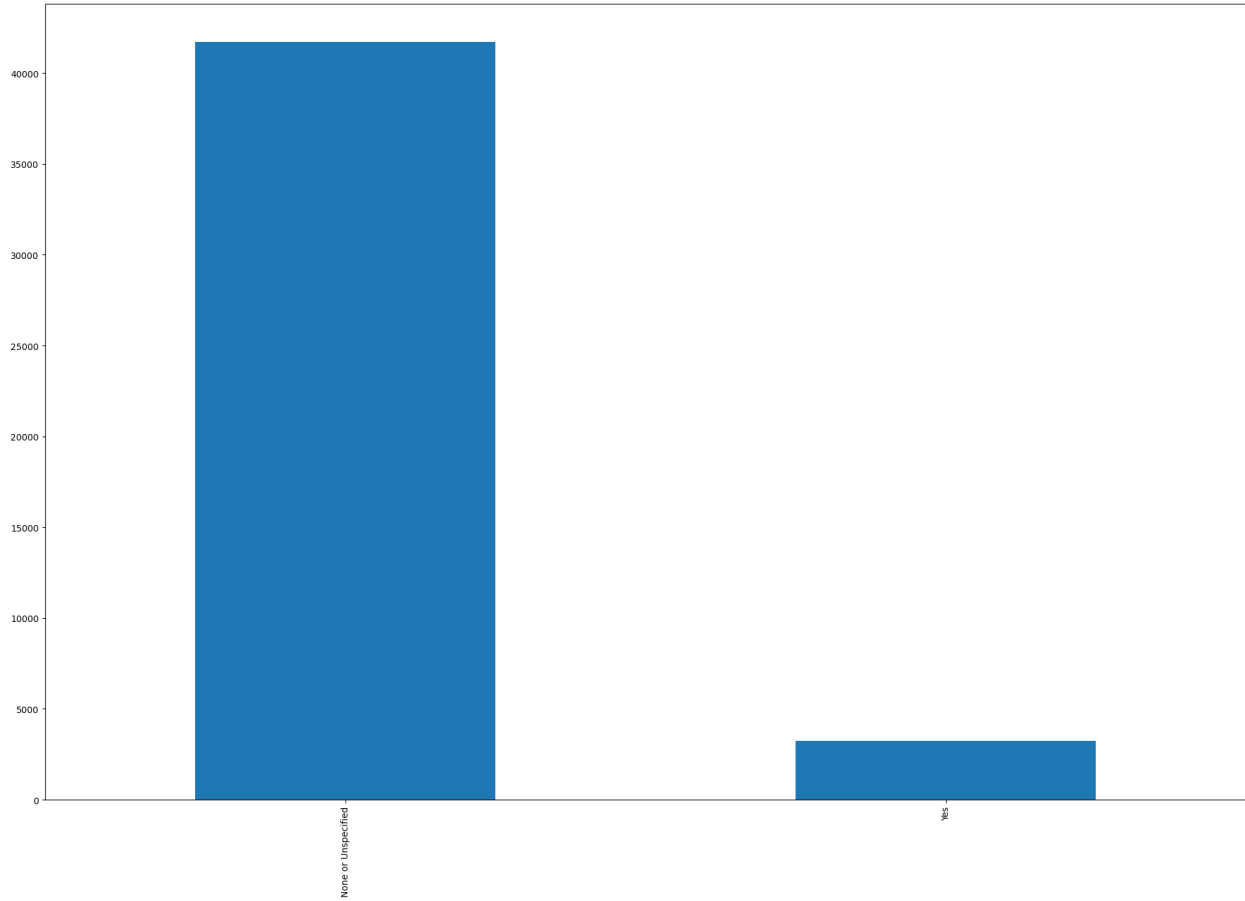


Couple System - 44974 / 412698

-----  
None or Unspecified 41727

Yes 3247

Name: Couple System, dtype: int64



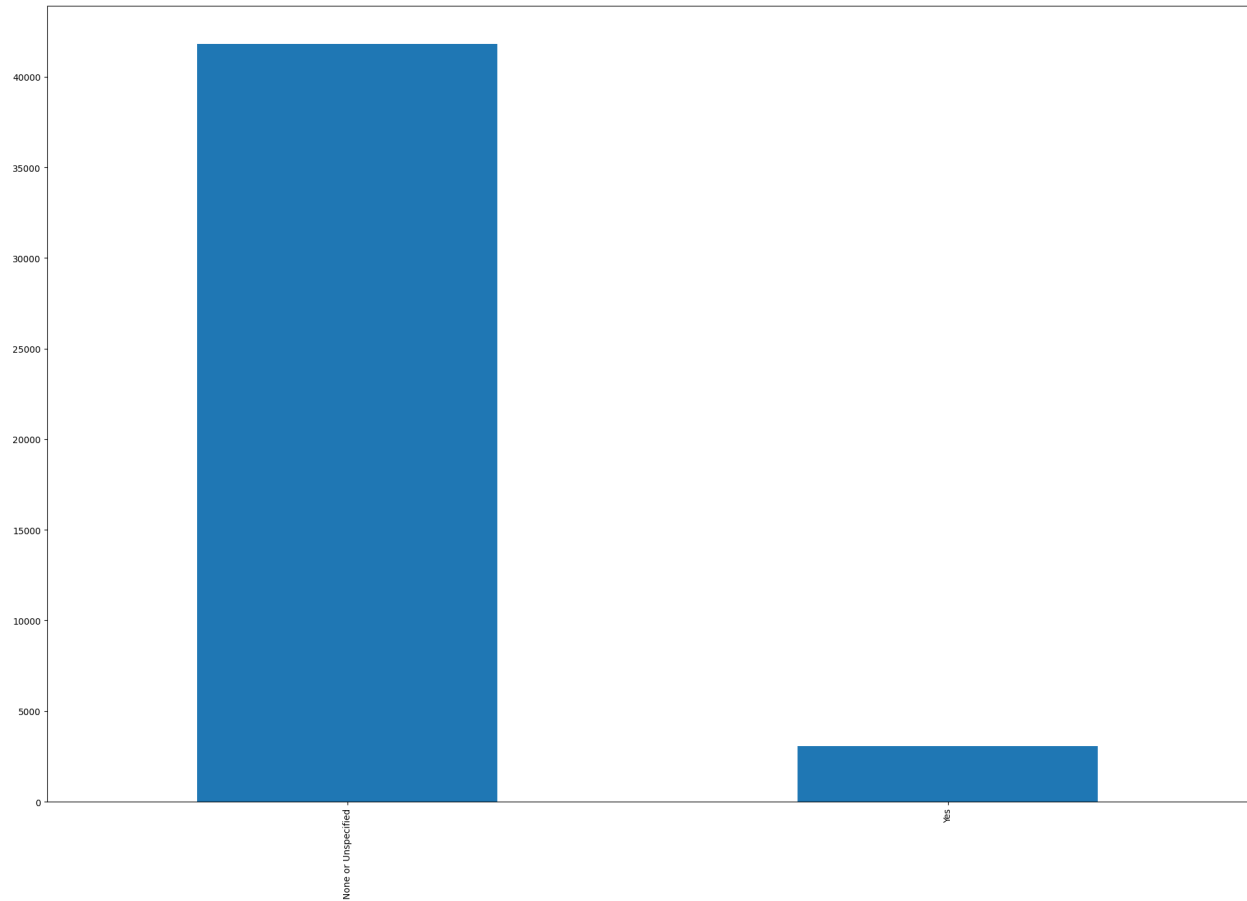
Grouser Tracks - 44875 / 412698

-----

None or Unspecified 41820

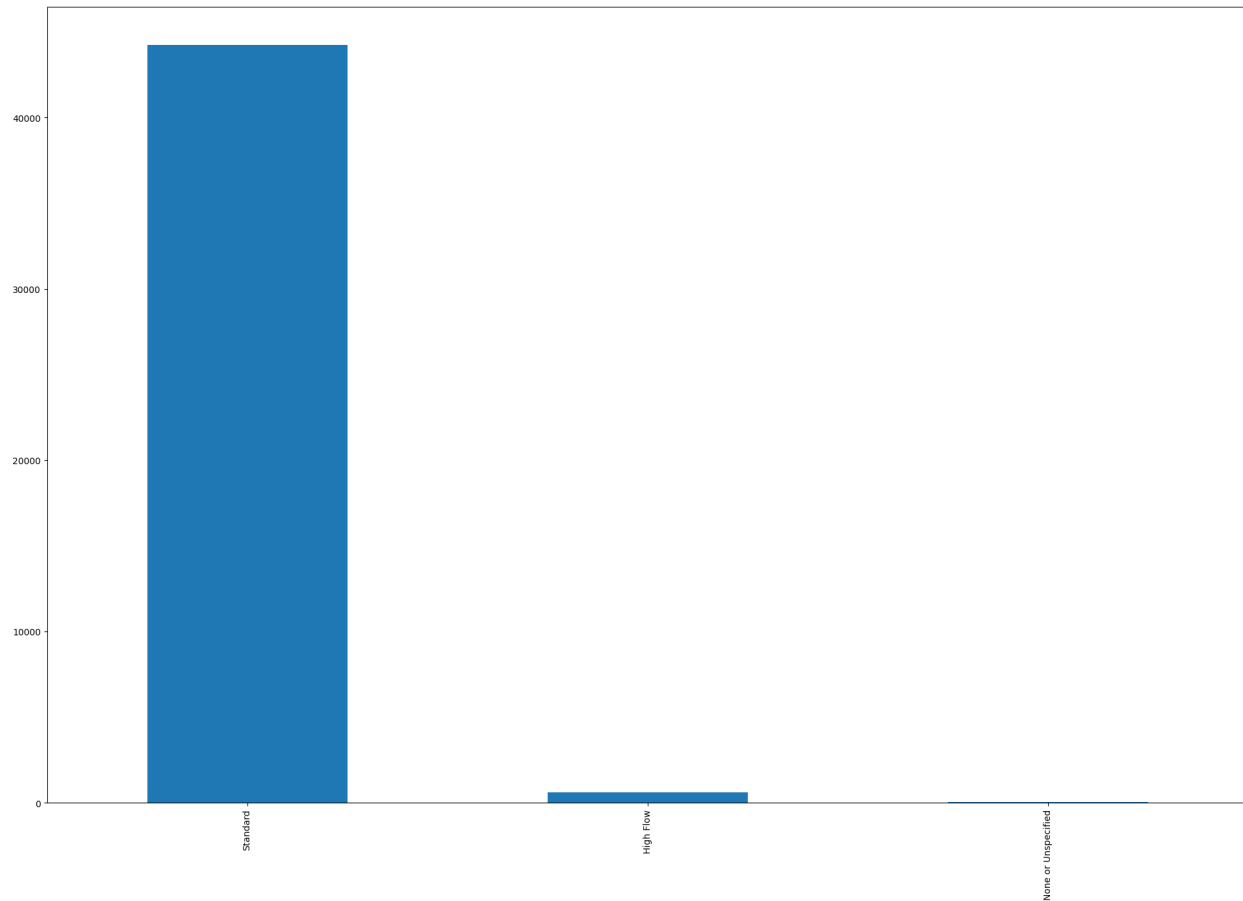
Yes 3055

Name: Grouser Tracks, dtype: int64



Hydraulics Flow - 44875 / 412698

-----  
Standard 44251  
High Flow 597  
None or Unspecified 27  
Name: Hydraulics Flow, dtype: int64



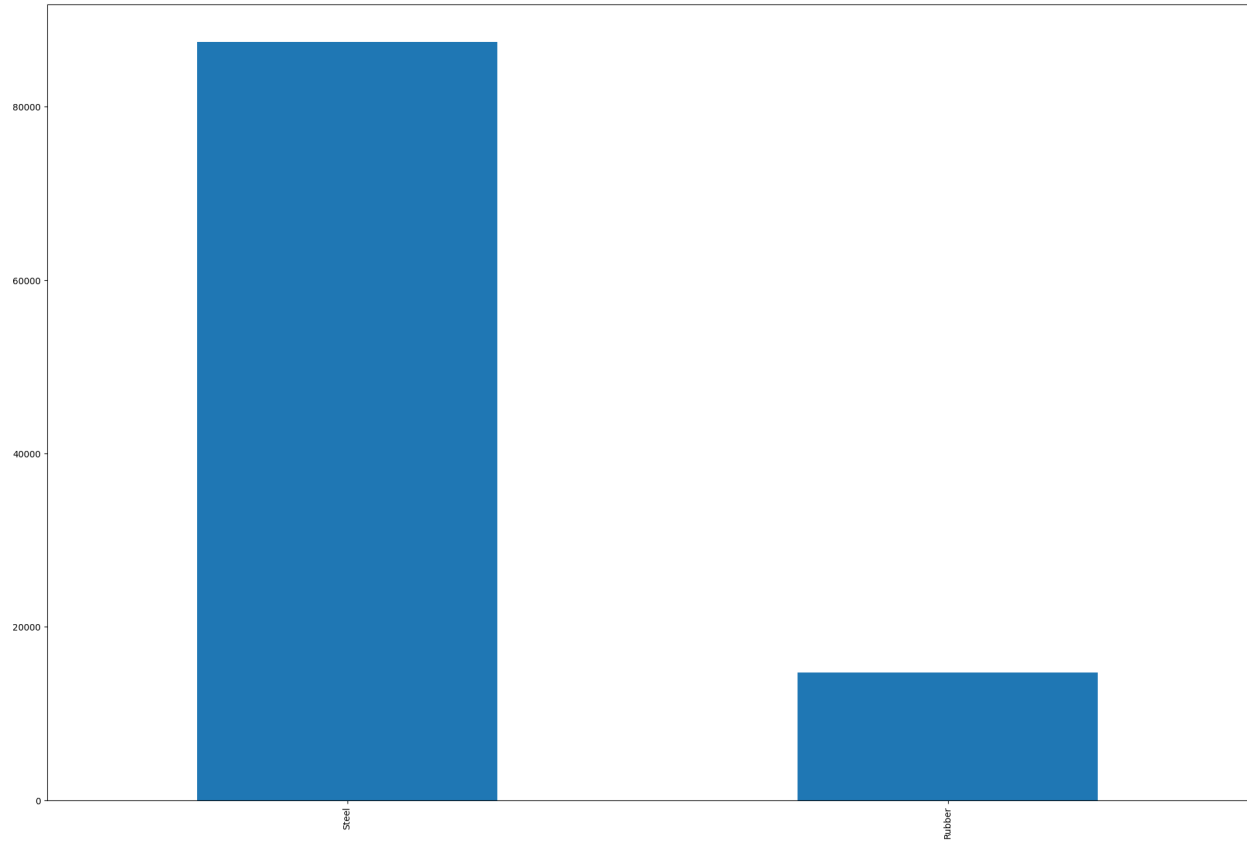
Tupper Type - 102193 / 412698

-----

Steel 87463

Rubber 14730

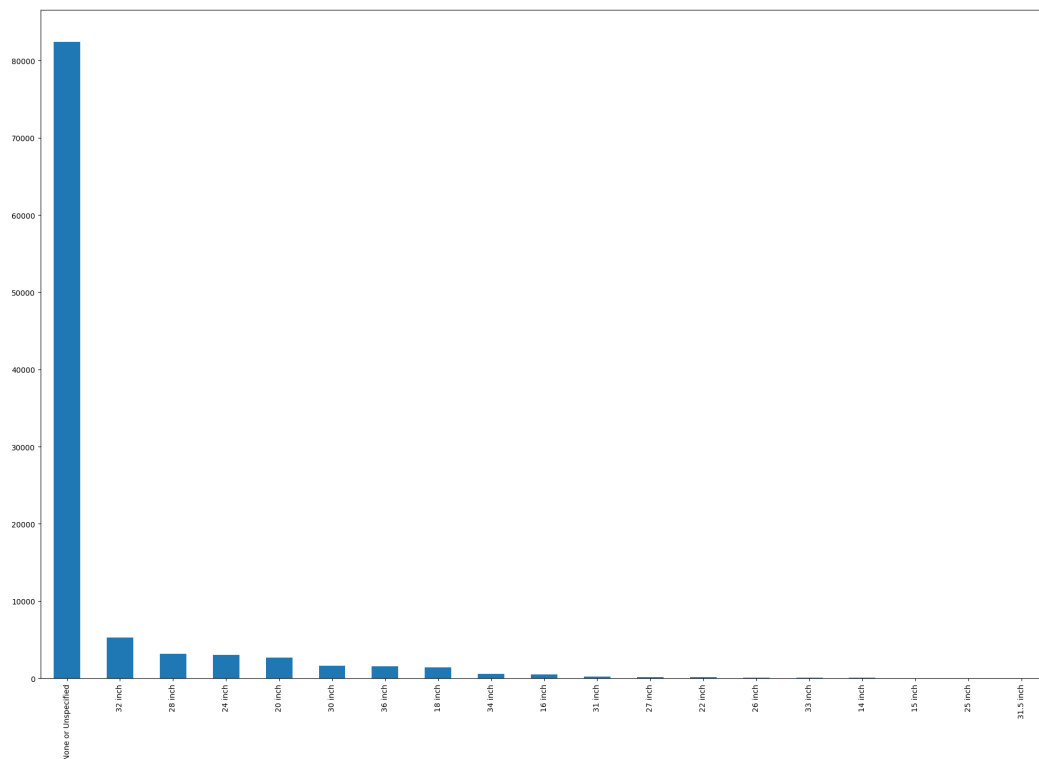
Name: Tupper Type, dtype: int64



Screen Size.1 - 102916 / 412698

```
-----
None or Unspecified      82444
32 inch                  5287
28 inch                  3152
24 inch                  2998
20 inch                  2664
30 inch                  1602
36 inch                  1544
18 inch                  1439
34 inch                   540
16 inch                   481
31 inch                   191
27 inch                   144
22 inch                   135
26 inch                    98
33 inch                    94
14 inch                    51
15 inch                    33
25 inch                    17
31.5 inch                  2
```

Name: Screen Size.1, dtype: int64



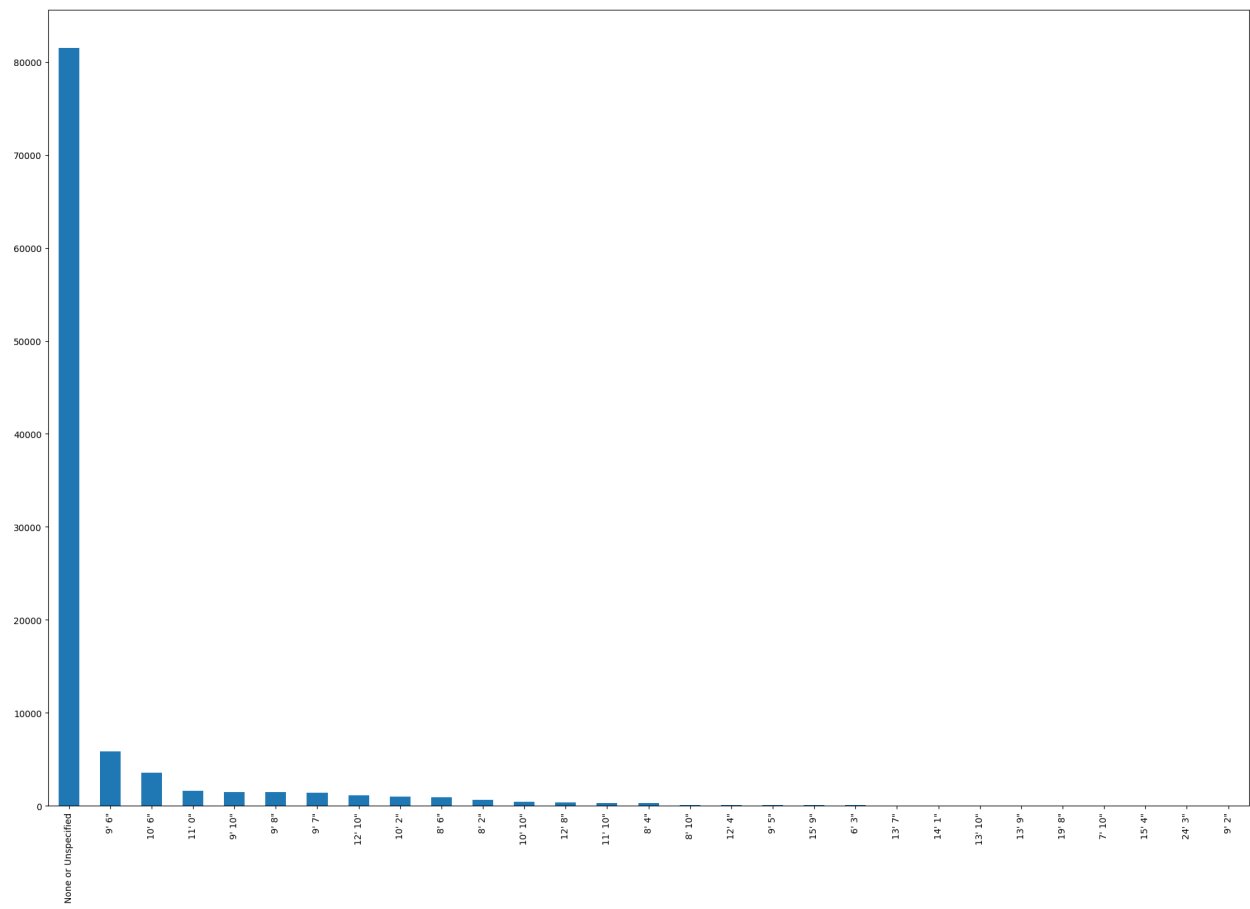
Stick Length - 102261 / 412698

-----

None or Unspecified	81539
9' 6"	5832
10' 6"	3519
11' 0"	1601
9' 10"	1463
9' 8"	1462
9' 7"	1423
12' 10"	1087
10' 2"	1004
8' 6"	908
8' 2"	614
10' 10"	414
12' 8"	322
11' 10"	307
8' 4"	274
8' 10"	104
12' 4"	103
9' 5"	101
15' 9"	87
6' 3"	51
13' 7"	11
14' 1"	7
13' 10"	7
13' 9"	7
19' 8"	5
7' 10"	3
15' 4"	3
24' 3"	2
9' 2"	1

Name: Stick Length, dtype: int64





Thumb - 102332 / 412698

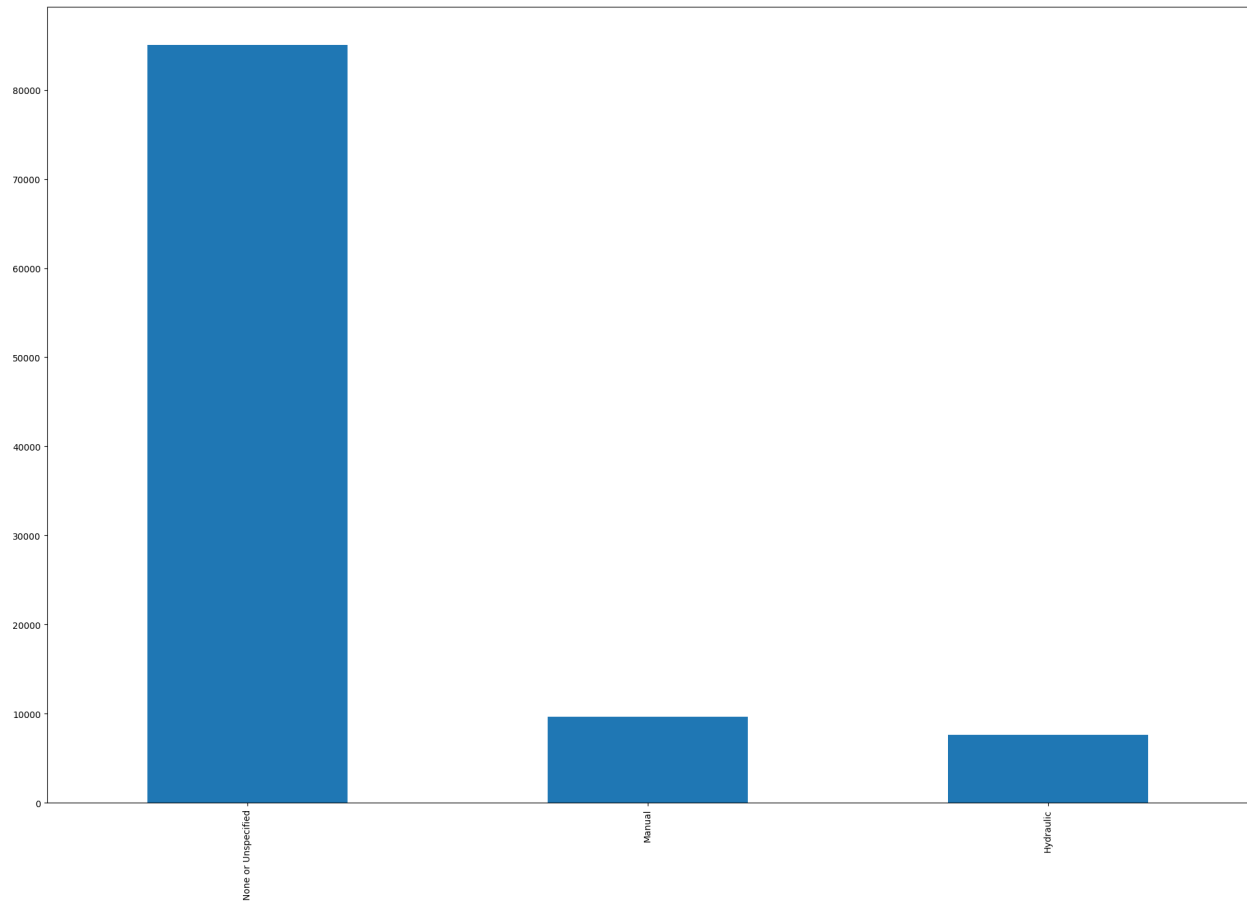
-----

None or Unspecified 85074

Manual 9678

Hydraulic 7580

Name: Thumb, dtype: int64



Pattern Changer - 102261 / 412698

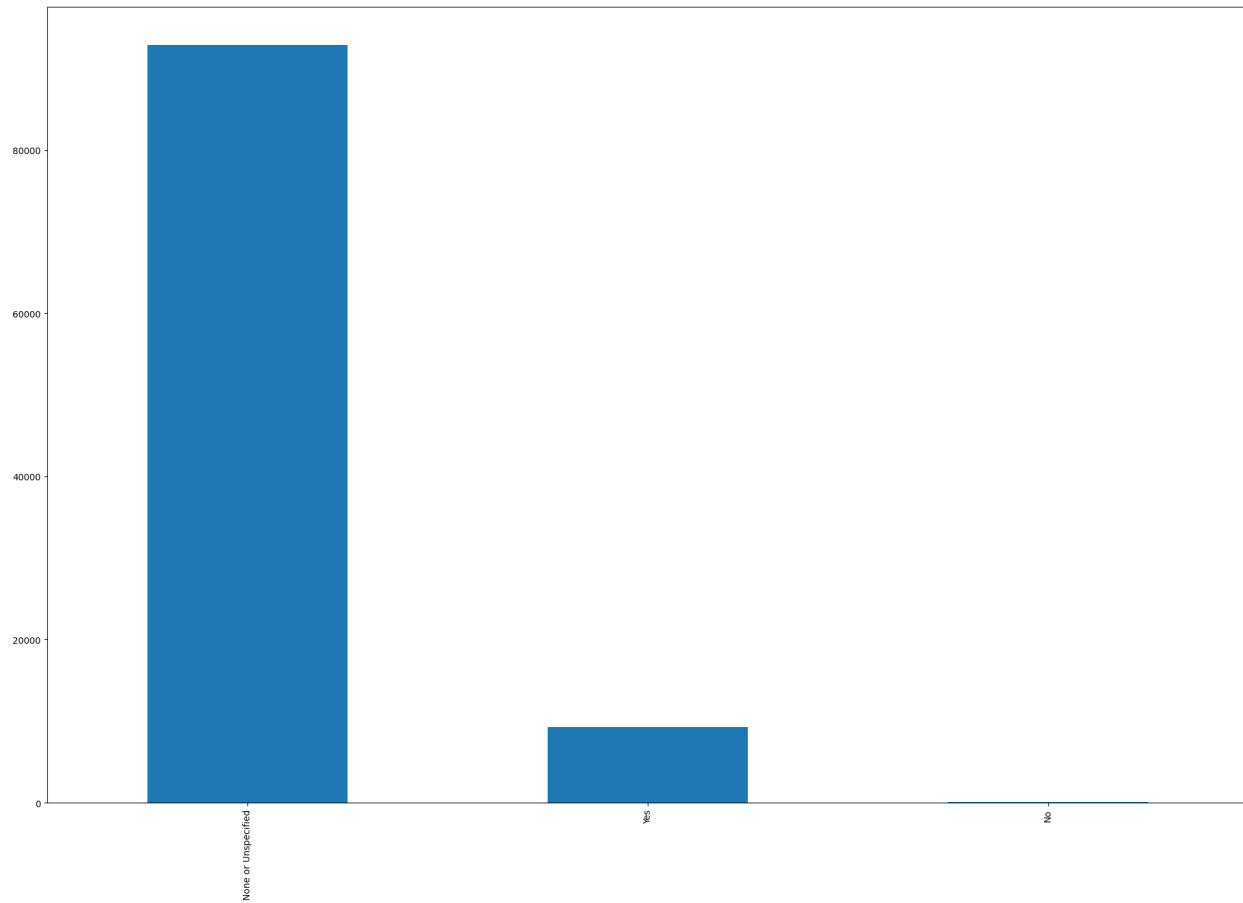
-----

None or Unspecified 92924

Yes 9269

No 68

Name: Pattern Changer, dtype: int64



Grouser Type - 102193 / 412698

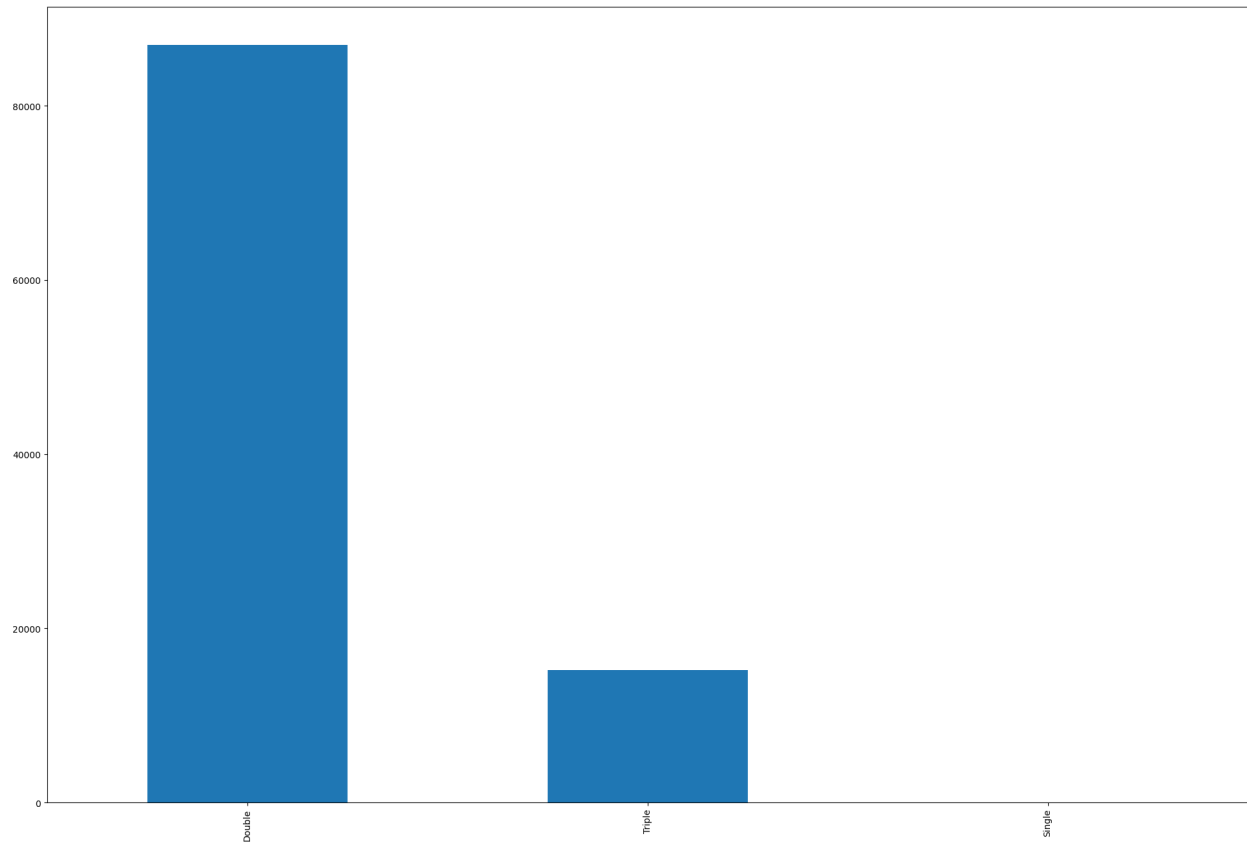
-----

Double 86998

Triple 15193

Single 2

Name: Grouser Type, dtype: int64



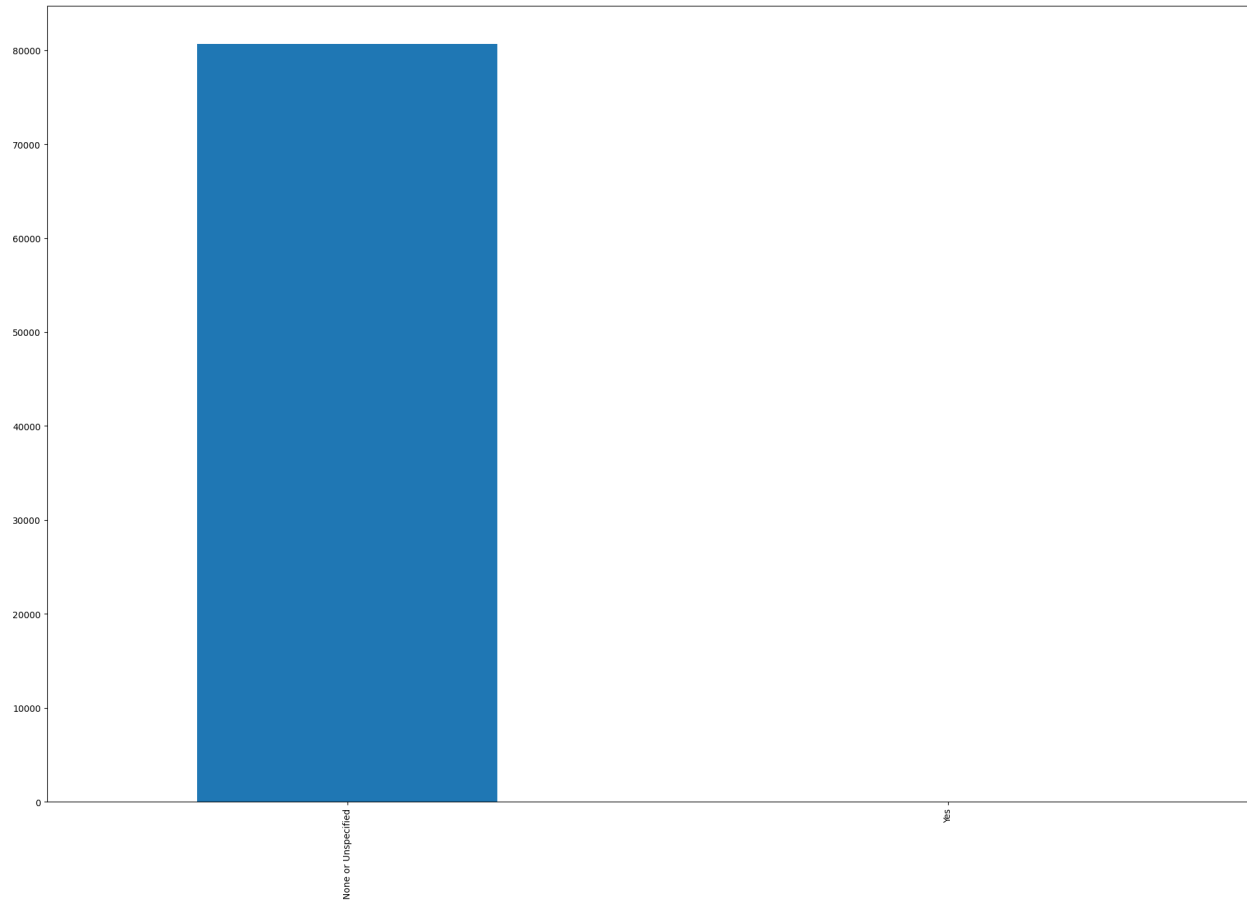
Backhoe Mounting - 80712 / 412698

-----

None or Unspecified 80692

Yes 20

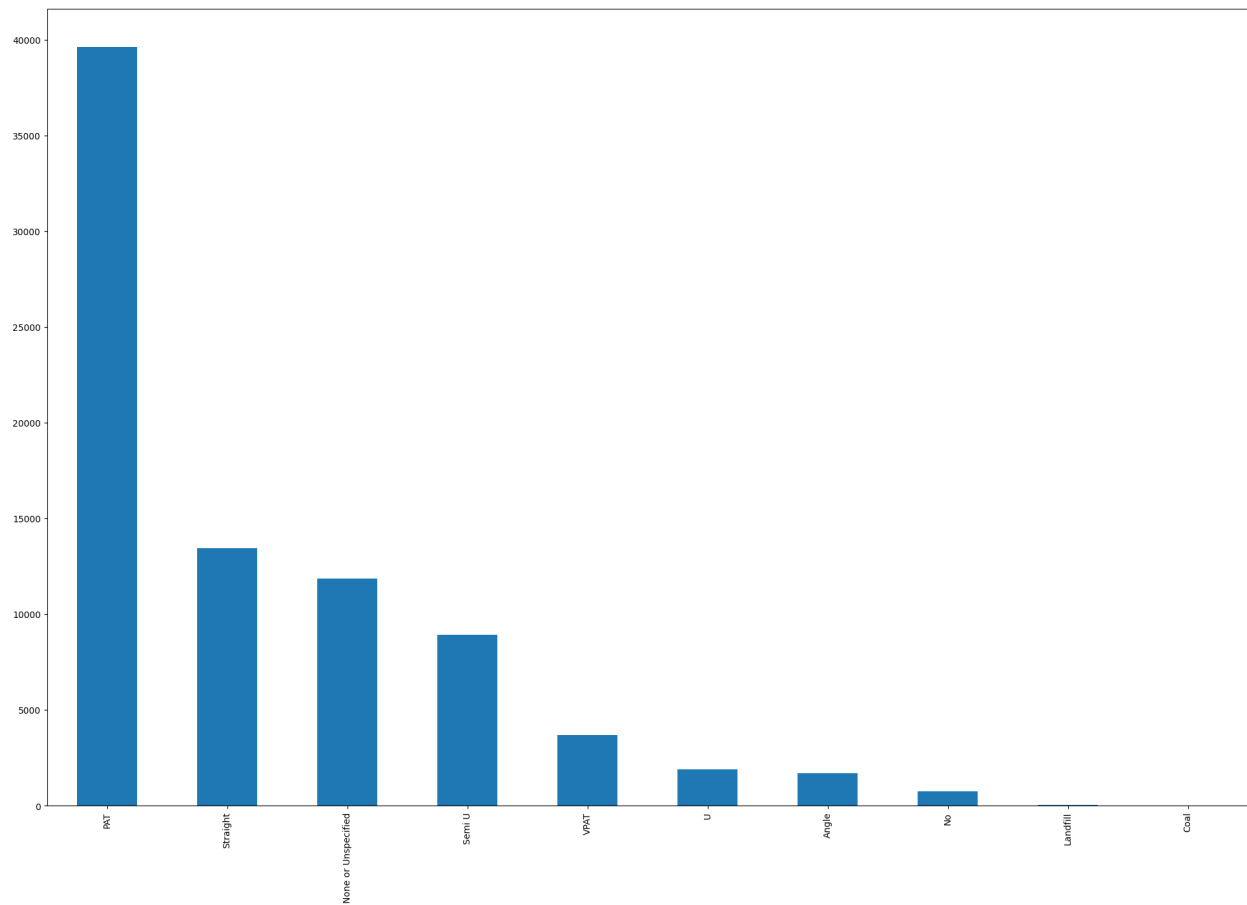
Name: Backhoe Mounting, dtype: int64



Blade Type - 81875 / 412698

```
-----  
PAT                39633  
Straight           13461  
None or Unspecified 11841  
Semi U             8907  
VPAT               3681  
U                  1888  
Angle              1684  
No                  743  
Landfill            26  
Coal                11
```

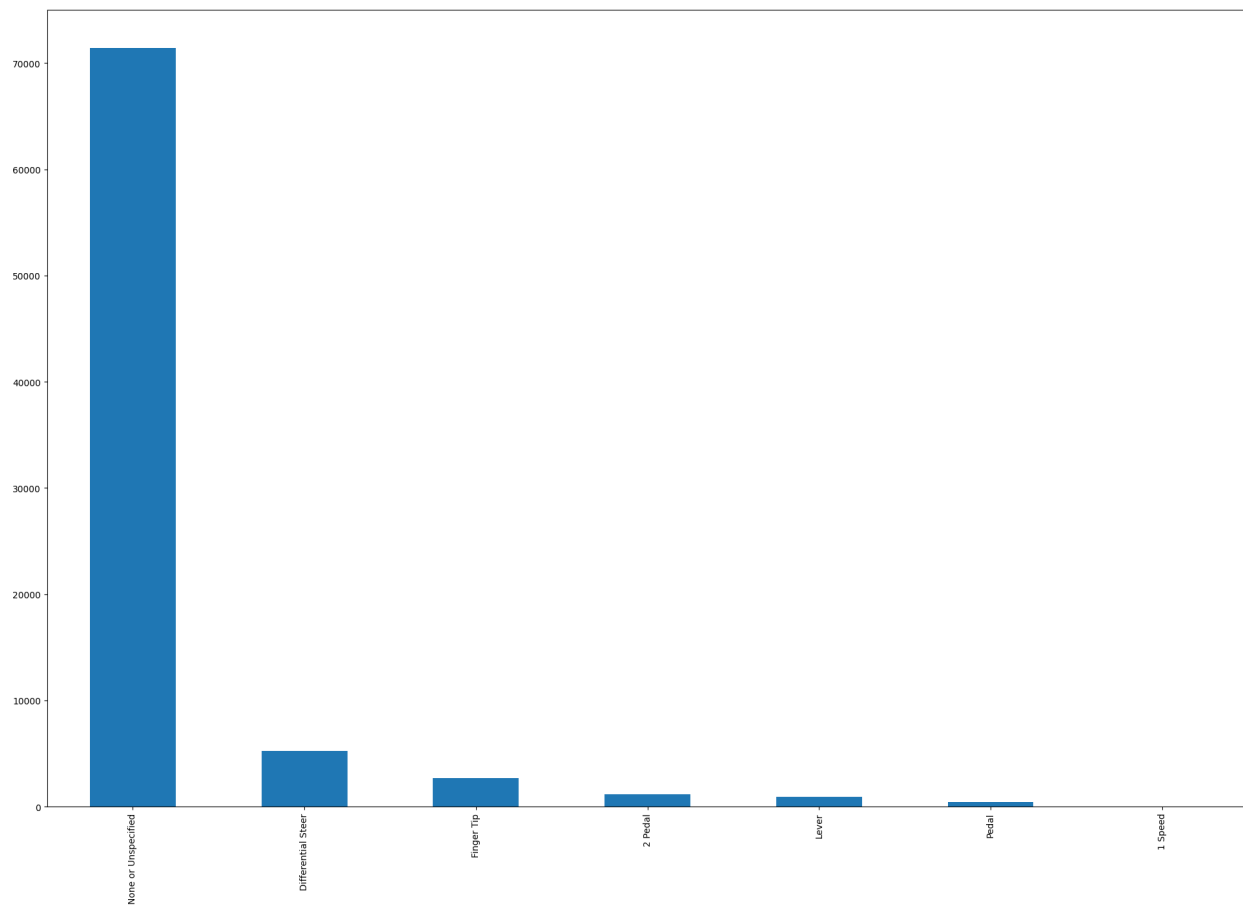
Name: Blade Type, dtype: int64



Travel Possibilities - 81877 / 412698

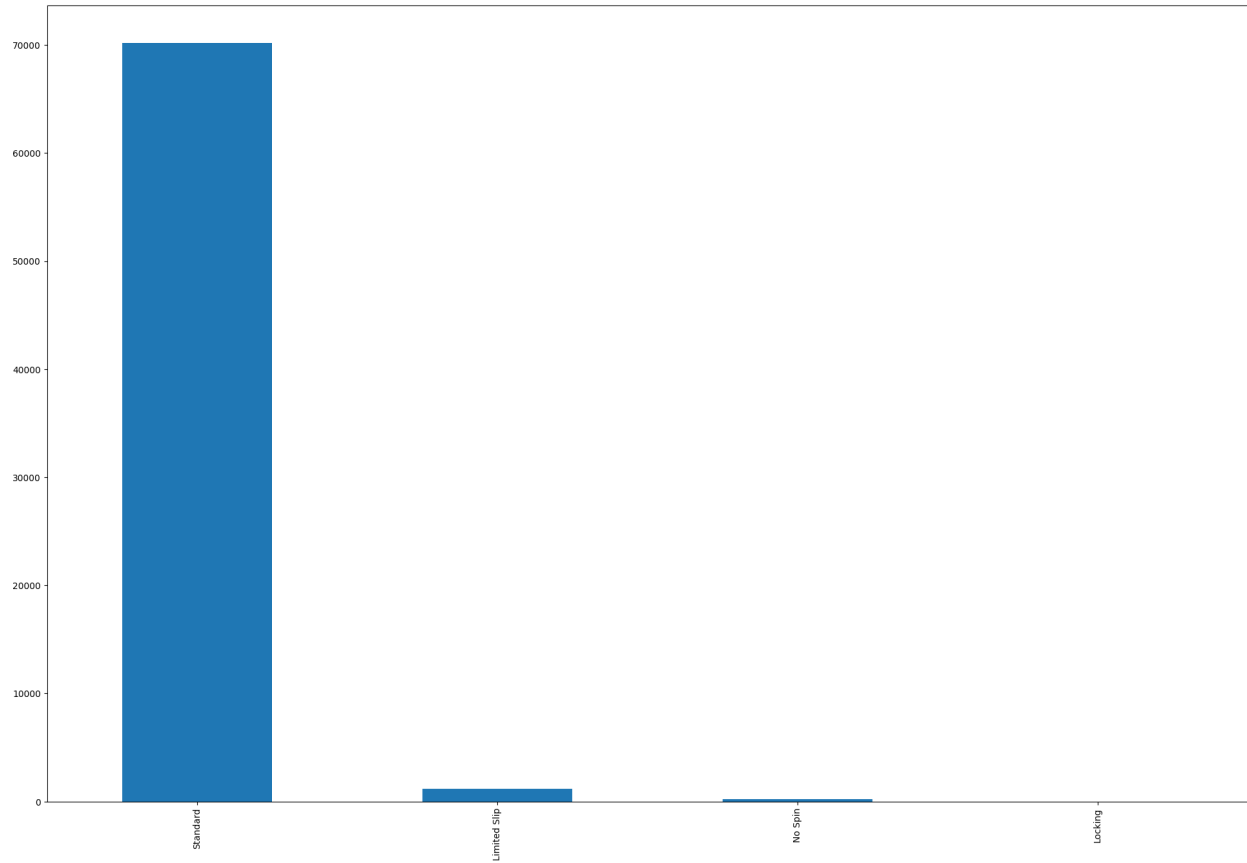
-----  
None or Unspecified 71447  
Differential Steer 5257  
Finger Tip 2693  
2 Pedal 1144  
Lever 902  
Pedal 423  
1 Speed 11

Name: Travel Possibilities, dtype: int64



Differential Type - 71564 / 412698

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Standard 70169  
Limited Slip 1181  
No Spin 212  
Locking 2  
Name: Differential Type, dtype: int64





Steering Controls - 71522 / 412698

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Conventional 70774

Command Control 594

Four Wheel Standard 139

Wheel 14

No 1

Name: Steering Controls, dtype: int64

