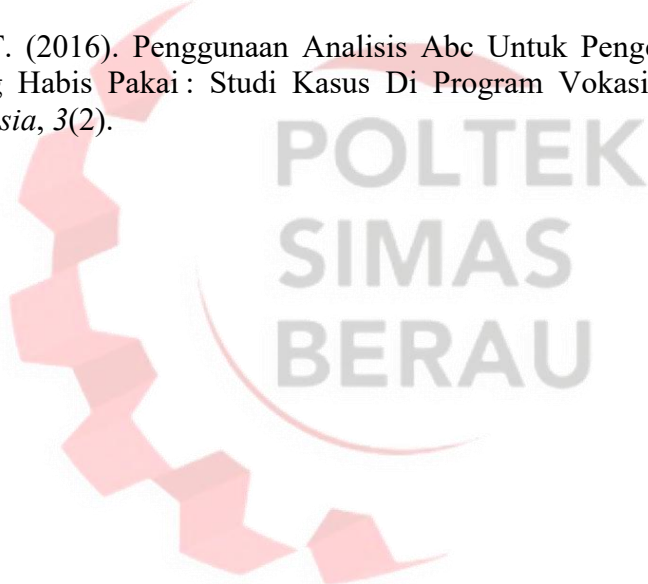


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POLTEK  
SIMAS  
BERAU

POLITEKNIK SINAR MAS  
BERAU COAL

## LAMPIRAN

### Lampiran 1 Frekuensi *Tools* dan *Consumable*

| No | Jenis                         | Kategori             | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|----|-------------------------------|----------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 1  | Torque wrench 100 lbft        | Special Tools        | 10           | 13          | 10          | 14          | 12          | 11          | 70            | 306                       |
| 2  | Torque wrench 250 lbft        |                      | 10           | 13          | 10          | 14          | 12          | 11          | 70            |                           |
| 3  | Torque wrench 600 lbft        |                      | 1            | -           | 4           | 16          | 14          | 10          | 45            |                           |
| 4  | Torque wrench 1000 lbft       |                      | 9            | 6           | 7           | 8           | 8           | 5           | 43            |                           |
| 5  | Transmission pressure grup    |                      | 7            | 5           | 7           | 6           | 8           | 9           | 42            |                           |
| 6  | Bearing Puller cup            |                      | -            | 1           | 1           | 1           | 3           | -           | 6             |                           |
| 7  | Piston ring compressor        |                      | -            | 1           | -           | 1           | -           | -           | 2             |                           |
| 8  | Piston ring expander          |                      | -            | -           | -           | 1           | -           | -           | 1             |                           |
| 9  | Valve spring compressor       |                      | 4            | 1           | 2           | 2           | 1           | 2           | 12            |                           |
| 10 | Bearing puller attachment     |                      | 1            | -           | 1           | 1           | -           | 1           | 4             |                           |
| 11 | Puller Three jaw 11 In        |                      | -            | 1           | -           | 1           | -           | -           | 2             |                           |
| 12 | Puller three jaw 8 In         |                      | 1            | 3           | -           | 1           | -           | 1           | 6             |                           |
| 13 | Puller two jaw 4 in           |                      | -            | 2           | -           | -           | -           | 1           | 3             |                           |
| 14 | Fuel Set                      | Vechile System Tools | -            | -           | -           | -           | -           | -           | 0             | 13                        |
| 15 | Nitrogen Accumulator charging |                      | -            | -           | -           | -           | -           | -           | 0             |                           |
| 16 | tool suspensi                 |                      | 1            | 4           | 4           | 1           | 1           | 2           | 13            |                           |
| 17 | plug hose                     |                      | -            | -           | -           | -           | -           | -           | 0             |                           |

| No | Jenis                       | Kategori                  | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|----|-----------------------------|---------------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 18 | Hose Cleaning projectile gp | Hose Assembly Tools       | 1            | 2           | 4           | 4           | 6           | 8           | 25            | 67                        |
| 19 | Hose Grup                   |                           | 7            | 5           | 7           | 6           | 8           | 9           | 42            |                           |
| 20 | Belt 1 ton                  | Lifting/Blocking/Clamping | 9            | 9           | 12          | 9           | 10          | 12          | 61            | 545                       |
| 21 | Link Bracket 3/8            |                           | 7            | 8           | 6           | 8           | 6           | 10          | 45            |                           |
| 22 | Belt 2 ton                  |                           | 10           | 8           | 6           | 8           | 14          | 10          | 56            |                           |
| 23 | Link Bracket 1/2            |                           | 5            | 8           | 8           | 6           | 8           | 14          | 49            |                           |
| 24 | Link Bracket 3/4            |                           | 7            | 6           | 8           | 7           | 6           | 8           | 42            |                           |
| 25 | Sackle 2 ton                |                           | 6            | 6           | 7           | 8           | 6           | 9           | 42            |                           |
| 26 | Sackle 3 ton                |                           | 9            | 10          | 8           | 9           | 5           | 6           | 47            |                           |
| 27 | Belt 4 ton                  |                           | 8            | 6           | 7           | 5           | 6           | 7           | 39            |                           |
| 28 | Belt 3 ton                  |                           | 2            | 1           | 5           | 4           | 6           | 5           | 23            |                           |
| 29 | Link Bracket 1"             |                           | 3            | 3           | 2           | 1           | 1           | 2           | 12            |                           |
| 30 | Eye Bolt M16                |                           | -            | 1           | 1           | 2           | 1           | 2           | 7             |                           |
| 31 | Eye Bolt M 24               |                           | -            | 3           | -           | 3           | 1           | -           | 7             |                           |
| 32 | Eye Bolt M10                |                           | 6            | 3           | 2           | 2           | 1           | 1           | 15            |                           |
| 33 | Eye Bolt M12                |                           | 2            | 1           | -           | 2           | 1           | 1           | 7             |                           |
| 34 | Eye Bolt 3/4                |                           | 3            | -           | 4           | 2           | 1           | 1           | 11            |                           |
| 35 | Eye Bolt 3/8                |                           | 2            | 4           | -           | 1           | 1           | 6           | 14            |                           |
| 36 | Eye Bolt 1/2                |                           | -            | -           | -           | 8           | 4           | 5           | 17            |                           |
| 37 | Sackle 8 ton                |                           | -            | 2           | 2           | 1           | 1           | -           | 6             |                           |
| 38 | Lever Block                 |                           | 1            | 2           | 1           | 2           | 2           | 3           | 11            |                           |
| 39 | Eye Bolt M 20               |                           | 3            | 1           | -           | 1           | 1           | 1           | 7             |                           |
| 40 | eye bolt 7/16               |                           | -            | 2           | 1           | 3           | 1           | -           | 7             |                           |
| 41 | Sackle 6 ton                |                           | 3            | 1           | 1           | 1           | 1           | 1           | 8             |                           |

| No | Jenis                      | Kategori         | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|----|----------------------------|------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 42 | Eye Bolt 5/8               | Pneumatic Tools  | -            | -           | -           | 3           | 3           | 4           | 10            | 286                       |
| 43 | Load Leveler;2.7 t         |                  | -            | -           | 1           | 1           | -           | -           | 2             |                           |
| 44 | Safety Air Gun             |                  | 6            | 3           | 6           | 4           | 7           | 12          | 38            |                           |
| 45 | Gerinda Botol              |                  | 6            | 8           | 4           | 8           | 9           | 8           | 43            |                           |
| 46 | Air Impact Wrench 1/2      |                  | 5            | 3           | 5           | 4           | 8           | 10          | 35            |                           |
| 47 | Air Impact Wrench 1"       |                  | 3            | 3           | 3           | 4           | 4           | 6           | 23            |                           |
| 48 | Compact Sender;5 in        |                  | 2            | 2           | 1           | 9           | 7           | 8           | 29            |                           |
| 49 | Air Impact Wrench 3/4      |                  | 2            | 3           | 4           | 6           | 2           | 7           | 24            |                           |
| 50 | Air Impact Wrench 3/8      |                  | 3            | 6           | 5           | 2           | 4           | 3           | 23            |                           |
| 51 | Tyre Pressure Gun          |                  | 5            | 4           | 1           | 1           | 2           | 2           | 15            |                           |
| 52 | Air Engraving Pen          |                  | 1            | -           | -           | 1           | 2           | 3           | 7             |                           |
| 53 | Safety Air Gun Long        |                  | -            | -           | 1           | 4           | 7           | 14          | 26            |                           |
| 54 | Spet Compressor            |                  | -            | -           | -           | 1           | 2           | 1           | 4             |                           |
| 55 | Greece Gun                 |                  | -            | 2           | -           | 1           | 4           | 2           | 9             |                           |
| 56 | Hose spiral Compressor     |                  | -            | -           | -           | 4           | 2           | 3           | 9             |                           |
| 57 | Cleaning gun               |                  | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 58 | Honning Tool               |                  | -            | -           | -           | -           | -           | -           | 0             |                           |
| 59 | ET Tool & COM Adapter      | Diagnostic Tools | 35           | 33          | 38          | 34          | 35          | 36          | 211           | 632                       |
| 60 | Tetra gauge ; 0-5800 psi   |                  | 14           | 12          | 12          | 10          | 16          | 18          | 82            |                           |
| 61 | Multi Tool                 |                  | 2            | 5           | 4           | 5           | 8           | 4           | 28            |                           |
| 62 | Tool Blowby                |                  | 2            | 5           | 4           | 5           | 8           | 4           | 28            |                           |
| 63 | Engine Pressure test       |                  | 1            | 2           | 4           | 2           | 4           | 3           | 16            |                           |
| 64 | Digital Battery Analyzer   |                  | 1            | 2           | 2           | 1           | 2           | 3           | 11            |                           |
| 65 | Digital Pressure Indicator |                  | -            | -           | 1           | 1           | -           | -           | 2             |                           |

| No | Jenis                          | Kategori        | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|----|--------------------------------|-----------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 66 | Compression test kit           | Measuring Tools | -            | 1           | -           | -           | -           | -           | 1             | 237                       |
| 67 | Digital Multimeter             |                 | 17           | 19          | 20          | 19          | 21          | 34          | 130           |                           |
| 68 | Infrared Thermometer           |                 | 10           | 10          | 13          | 14          | 12          | 10          | 69            |                           |
| 69 | Digital Tachometer             |                 | 10           | 3           | 6           | 4           | 5           | 10          | 38            |                           |
| 70 | Lowcost Blowby                 |                 | 3            | -           | 1           | 1           | 1           | 2           | 8             |                           |
| 71 | Insulation Testing             |                 | -            | -           | -           | -           | -           | -           | 0             |                           |
| 72 | Continuity Testing             |                 | -            | -           | -           | -           | -           | -           | 0             |                           |
| 73 | Bore scope                     |                 | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 74 | Cable Ethernet                 |                 | -            | -           | 3           | -           | 1           | 1           | 5             |                           |
| 75 | Clamp On Meter                 |                 | -            | -           | -           | -           | 1           | 1           | 2             |                           |
| 76 | Vernier Calliper               | Measuring Tools | 3            | 7           | 4           | 6           | 3           | 5           | 28            | 237                       |
| 77 | Micrometer Outside 25-50 mm    |                 | 6            | 7           | 2           | 9           | 2           | -           | 26            |                           |
| 78 | Metric Dial Indicator          |                 | 4            | 5           | 3           | 2           | 3           | 4           | 21            |                           |
| 79 | Vernier Calliper Digital       |                 | 6            | 4           | 5           | 7           | 3           | 1           | 26            |                           |
| 80 | Depth micrometer 9 In          |                 | 2            | 4           | 5           | 4           | 5           | 4           | 24            |                           |
| 81 | Linner Projection indicator gp |                 | 3            | 5           | 1           | 3           | 2           | -           | 14            |                           |
| 82 | Micrometer Outside 100-125 mm  |                 | 5            | 4           | 5           | 4           | 1           | -           | 19            |                           |
| 83 | Micrometer Outside 1-25 mm     |                 | -            | -           | 4           | 2           | 3           | 4           | 13            |                           |
| 84 | Micrometer Outside 50-75 mm    |                 | 3            | 1           | 2           | 1           | 1           | -           | 8             |                           |
| 85 | Micrometer Outsde 125-150 mm   |                 | -            | 3           | 3           | -           | 1           | -           | 7             |                           |
| 86 | Micrometer Outside 25-50 mm    |                 | 6            | 7           | 2           | 9           | 2           | -           | 26            |                           |
| 87 | Thread Identification kit      |                 | 4            | -           | 1           | -           | 1           | -           | 6             |                           |
| 88 | Metric Dial Bore Gauge         |                 | -            | -           | 1           | -           | 4           | 1           | 6             |                           |
| 89 | Dial Vernier Caliper           |                 | 4            | -           | 1           | -           | 1           | 1           | 7             |                           |

| No  | Jenis                               | Kategori  | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|-------------------------------------|-----------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 90  | Tubular Inside Micrometer;Multitoyo | Hand Tool | 1            | 1           | -           | -           | 2           | 1           | 5             |                           |
| 91  | Tool Waterpass                      |           | 1            | -           | -           | -           | -           | -           | 1             |                           |
| 92  | Combination Mili Set                |           | 20           | 18          | 16          | 19          | 17          | 20          | 110           | 1453                      |
| 93  | Metric Socket set;3/8 in dr; 12 pt  |           | 16           | 18          | 23          | 10          | 19          | 22          | 108           |                           |
| 94  | Allen Key Metric;Krisbow            |           | 12           | 15          | 16          | 13          | 11          | 24          | 91            |                           |
| 95  | Allen Key Inch;Krisbow              |           | 11           | 13          | 15          | 13          | 13          | 23          | 88            |                           |
| 96  | Combination Wrench grup             |           | 14           | 14          | 12          | 16          | 13          | 14          | 83            |                           |
| 97  | Allen Key torx;Krisbow              |           | 15           | 9           | 12          | 9           | 14          | 18          | 77            |                           |
| 98  | Metric socket set;1/2 in dr;10 pt   |           | 14           | 24          | 24          | 11          | 10          | 13          | 96            |                           |
| 99  | Metric Hex Bit socket set           |           | 7            | 8           | 7           | 8           | 6           | 8           | 44            |                           |
| 100 | Deep Socket mili set drive 3/8      |           | 4            | 6           | 4           | 10          | 8           | 8           | 40            |                           |
| 101 | Allen Key 5/8                       |           | 4            | 4           | 7           | 7           | 5           | 8           | 35            |                           |
| 102 | Extension 3/4                       |           | 5            | 8           | 6           | 4           | 6           | 8           | 37            |                           |
| 103 | External Pliers Assembly            |           | 2            | 8           | 3           | 10          | 6           | 2           | 31            |                           |
| 104 | Internal Pliers Assembly            |           | 5            | 9           | 2           | 12          | 4           | 2           | 34            |                           |
| 105 | Copper Hammer 2 kg                  |           | 7            | 4           | 3           | 4           | 6           | 10          | 34            |                           |
| 106 | Seal Pick                           |           | 4            | 1           | 4           | 3           | 5           | 2           | 19            |                           |
| 107 | Adjustable Wrench                   |           | 5            | 3           | 3           | 3           | 6           | 9           | 29            |                           |
| 108 | Sliding T Handle3/4                 |           | 4            | 4           | 6           | 5           | 5           | 6           | 30            |                           |
| 109 | Pipe Wrench 24";Sellery             |           | 2            | 1           | 4           | 4           | 2           | 4           | 17            |                           |
| 110 | Copper Hammer 5 kg                  |           | 7            | 5           | 6           | 2           | 2           | 4           | 26            |                           |
| 111 | Sledge Hammer;5,5 lb                |           | 4            | 2           | 1           | 6           | 5           | 4           | 22            |                           |
| 112 | Ratchet drive 3/4                   |           | -            | 4           | -           | 1           | 4           | 9           | 18            |                           |
| 113 | Adapter 3/4 to 1                    |           | 4            | 6           | 1           | 2           | 1           | 3           | 17            |                           |

| No  | Jenis                                     | Kategori                           | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|-------------------------------------------|------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 114 | Adapter 3/4 to 1/2                        | POLITEKNIK SINAR MAS<br>BERAU COAL | 4            | 4           | 3           | 1           | 3           | 3           | 18            |                           |
| 115 | Pipe Wrench 36 In                         |                                    | 3            | 4           | 4           | 3           | 1           | -           | 15            |                           |
| 116 | Sliding T handle 1"                       |                                    | 1            | 5           | 1           | 2           | 4           | 3           | 16            |                           |
| 117 | Pin Punch Set; 7 pc                       |                                    | 4            | -           | 1           | 1           | 2           | -           | 8             |                           |
| 118 | Dial Torque wrench;3/8 in dr;50 Lbft      |                                    | 6            | 3           | 4           | 5           | -           | 1           | 19            |                           |
| 119 | Extension 1 in                            |                                    | 2            | 1           | 2           | 2           | 4           | 6           | 17            |                           |
| 120 | Adapter 1 to 3/4                          |                                    | 4            | 4           | 3           | 2           | -           | 2           | 15            |                           |
| 121 | L Handle 3/4                              |                                    | -            | 1           | -           | 1           | 2           | 5           | 9             |                           |
| 122 | Snap Ring Kotak                           |                                    | 2            | 2           | 2           | 1           | 1           | -           | 8             |                           |
| 123 | Socket Bintang Male                       |                                    | 1            | 1           | -           | 2           | -           | -           | 4             |                           |
| 124 | External Retaining Ring Pliers            |                                    | 2            | 1           | 3           | 1           | 3           | 1           | 11            |                           |
| 125 | Socket Bintang female                     |                                    | 1            | 1           | -           | 2           | 3           | -           | 7             |                           |
| 126 | Breaker Bar dr 3/4                        |                                    | -            | -           | 1           | 1           | 3           | 1           | 6             |                           |
| 127 | Pry Bar                                   |                                    | 1            | -           | 1           | 2           | 1           | 1           | 6             |                           |
| 128 | Torsimeter Dr 3/4                         |                                    | 1            | 1           | 1           | 2           | 1           | -           | 6             |                           |
| 129 | Snap Ring SPI Inner; Sellery              |                                    | 3            | 1           | 1           | -           | -           | -           | 5             |                           |
| 130 | Needle Nose Pliers                        |                                    |              | -           | 3           | 1           | 2           | -           | 6             |                           |
| 131 | L Handle 1"                               |                                    | -            | -           | -           | -           | -           | 3           | 3             |                           |
| 132 | Internal Retaining Ring Pliers;PN.1361452 |                                    |              | 2           | 1           | 1           | 2           | -           | 6             |                           |
| 133 | Ratcheting Combination Wrench             |                                    | -            | -           | 1           | 1           | 2           | -           | 4             |                           |
| 134 | Dial torque wrench;1/2 in dr;175 lbft     |                                    | -            | -           | 1           | -           | -           | -           | 1             |                           |
| 135 | Snap Ring SPI Outher                      |                                    | -            | -           | -           | 1           | -           | -           | 1             |                           |
| 136 | Socket grup dr 3/4                        |                                    | 12           | 15          | 14          | 10          | 14          | 17          | 82            |                           |

| No  | Jenis                              | Kategori     | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|------------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 137 | Socket grup dr 1                   |              | 10           | 13          | 12          | 12          | 18          | 18          | 83            |                           |
| 138 | HD socket set;3/4                  |              | 1            | -           | 1           | 1           | 2           | 2           | 7             |                           |
| 139 | HD socket Set; 17 pc; 1 in dr      |              | -            | -           | 2           | 1           | -           | 1           | 4             |                           |
| 140 | Turning Tool                       | Engine Tools | 12           | 10          | 16          | 13          | 12          | 14          | 77            | 562                       |
| 141 | Feeler Gage Z                      |              | 10           | 16          | 10          | 9           | 15          | 13          | 73            |                           |
| 142 | Turning Tool grader                |              | 4            | 2           | -           | 3           | 3           | -           | 12            |                           |
| 143 | Vaccum Pump                        |              | 12           | 14          | 12          | 16          | 12          | 11          | 77            |                           |
| 144 | Filter Strap                       |              | 12           | 15          | 12          | 17          | 12          | 14          | 82            |                           |
| 145 | Injector High Gauge                |              | 10           | 15          | 9           | 9           | 14          | 12          | 69            |                           |
| 146 | Induction Heaters                  |              | 4            | 4           | 2           | 4           | 4           | 3           | 21            |                           |
| 147 | Stud                               |              | 3            | 1           | 1           | 2           | 6           | 4           | 17            |                           |
| 148 | Valve Seat Extractor               |              | 5            | 7           | 2           | 2           | 3           | 2           | 21            |                           |
| 149 | Gauge Valve Last Adjusment         |              | 3            | -           | -           | 6           | 6           | 3           | 18            |                           |
| 150 | Timming and Fuel Setting Grup      |              | 2            | 4           | -           | 1           | 1           | 4           | 12            |                           |
| 151 | Filter Chain                       |              | 1            | -           | -           | -           | -           | -           | 1             |                           |
| 152 | Valve Spring                       |              | 6            | 2           | 1           | 1           | 2           | 3           | 15            |                           |
| 153 | Piston Ring Groove Gauge<br>GONOGO |              | -            | 3           | 1           | 3           | 1           | -           | 8             |                           |
| 154 | Tool Axle Shaft                    |              | 2            | 2           | 1           | 1           | -           | -           | 6             |                           |
| 155 | Valve Spring Tester                |              | -            | -           | -           | -           | -           | -           | 0             |                           |
| 156 | Tool Sleeve Injector               |              | -            | -           | 1           | 1           | -           | 2           | 4             |                           |
| 157 | Turning Tool Big                   |              | -            | 1           | 1           | 1           | 2           | 3           | 8             |                           |
| 158 | Pressurizing pump Tool             |              |              | 2           |             | 1           |             |             | 3             |                           |
| 159 | Remove Linner                      |              | 1            | 1           | -           | 2           | -           | 2           | 6             |                           |
| 160 | Tool Timming Calibration           |              | 1            | -           | -           | -           | 1           | 2           | 4             |                           |

| No  | Jenis                           | Kategori                    | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|---------------------------------|-----------------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 161 | Sheel Cranksaft Engine C15      |                             | -            | 1           | -           | -           | 1           | 2           | 4             |                           |
| 162 | Sheel Crankshaft C13            |                             | 1            | 1           | 1           | 1           | -           | -           | 4             |                           |
| 163 | Cylinder Install Linner         |                             | -            | 2           | 1           | -           | -           | -           | 3             |                           |
| 164 | Extractor seal crankshaft       |                             | -            | -           | 1           | -           | -           | 1           | 2             |                           |
| 165 | Sheel Crankshaft;PN.5639214     |                             | 2            | -           | -           | -           | 1           | 1           | 4             |                           |
| 166 | Sheel Crankshaft Rear C9        |                             | 1            | -           | 1           | -           | 1           | -           | 3             |                           |
| 167 | seal crankshaft front PN;6V6142 |                             |              |             | 2           |             |             | -           | 2             |                           |
| 168 | Sheel Crankshaft Rear 3306      |                             | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 169 | Sheel Crankshaft 3400;PN.6V6143 |                             | -            | -           | 1           | -           | 1           | 1           | 3             |                           |
| 170 | Scissor piston ring compressor  |                             | -            | 1           | -           | 1           | -           | -           | 2             |                           |
| 171 | AC Charging And Test gp         | Air Conditioning Tool       | 4            | 4           | 1           | 4           | 2           | -           | 15            | 16                        |
| 172 | Vaccum AC                       |                             | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 173 | Hyd Hand Pump                   | Hydraulic/Mechanical/Puller | 2            |             | 1           | 1           | 3           | -           | 7             | 110                       |
| 174 | Driver Plate Gp                 |                             | -            | 1           | 1           | 3           | 2           | 4           | 11            |                           |
| 175 | Manual Hydraulic Pump           |                             | -            | 1           | 2           | 2           | 2           | 3           | 10            |                           |
| 176 | Cylinder Jack 80 ton            |                             | 3            | 3           | 1           | -           | 1           | 1           | 9             |                           |
| 177 | Cylinder Jack 30 ton            |                             | -            | 2           | 1           | 1           | 1           | 1           | 6             |                           |
| 178 | Bearing Puller Assy             |                             | -            | 2           | -           | 1           | 3           | 3           | 9             |                           |
| 179 | Electric Hand Pump              |                             | 3            | 3           | 1           | -           | 2           | -           | 9             |                           |
| 180 | Hi Torque                       |                             | -            | 2           | 3           | 4           | 4           | -           | 13            |                           |
| 181 | Tool Press Piston               |                             | 3            | 3           | -           | 3           | 1           | -           | 10            |                           |
| 182 | Bearing Puller;20 t             |                             | 1            | -           | 1           | 1           | -           | 1           | 4             |                           |
| 183 | Cylinder jack 100 ton           |                             | -            | 1           | 1           | -           | -           | -           | 2             |                           |
| 184 | Puller Screw;PN.8S2264          |                             | 1            | -           | 1           | -           | -           | -           | 2             |                           |

| No  | Jenis                                   | Kategori          | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|-----------------------------------------|-------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 185 | H-bar                                   |                   | -            | 1           | 2           | 1           | 2           | 3           | 9             |                           |
| 186 | Bearing camshaft remover                |                   |              |             | 2           |             | 1           | 3           | 6             |                           |
| 187 | Tool Baji wedge                         |                   | -            | -           | 1           | 1           | -           | 1           | 3             |                           |
| 188 | Power Inverter                          | Electrical Tools  | 3            | 6           | 3           | 2           | 3           | 4           | 21            | 101                       |
| 189 | Extension Cable                         |                   | 6            | 2           | 3           | 3           | 1           | 5           | 20            |                           |
| 190 | Cable Roll                              |                   | 2            | 4           | 2           | 3           | 3           | 2           | 16            |                           |
| 191 | Gerinda Potong                          |                   | -            | 2           | 4           | 3           | 1           | 1           | 11            |                           |
| 192 | Mesin potong circular                   |                   | -            | -           | -           | -           | -           | -           | 0             |                           |
| 193 | Heat Gun                                |                   | -            | 3           | 1           | 2           | 1           | 5           | 12            |                           |
| 194 | Electric Drill                          |                   | -            | 2           | 1           | 1           | -           | 2           | 6             |                           |
| 195 | Impact Cordless Dr 1/2;Krisbow          |                   | -            | -           | -           | 1           | 2           | 5           | 8             |                           |
| 196 | Cordless Impact Drill;Krisbow           |                   | -            | -           | -           | 1           | 2           | 4           | 7             |                           |
| 197 | Torque Multiplier gp                    |                   | 6            | 5           | 5           | 4           | 2           | 4           | 26            |                           |
| 198 | Duo Cone Seal Installer; PN.4C6582      | Power Train Tools | 2            |             |             | -           | -           | -           | 2             | 58                        |
| 199 | Duo Cone Seal Installer;PN.1293944      |                   | -            | -           | -           | -           | -           | -           | 0             |                           |
| 200 | R&I Shift Gear Nut<br>Spanner;PN.6V3158 |                   | 1            | 1           | 1           |             | 1           | -           | 4             |                           |
| 201 | Duo Cone Seal Installer;PN.1407642      |                   | -            | 1           |             | -           | -           | -           | 1             |                           |
| 202 | Duo Cone Seal Installer;PN.2858787      |                   | -            | -           | 2           | -           | -           | -           | 2             |                           |
| 203 | Duo Cone Seal Installer;PN.9U3691       |                   | -            | 1           | 2           | -           | -           | -           | 3             |                           |
| 204 | Duo Cone Seal Installer;PN.8T9206       |                   | 2            | -           | -           | -           | -           | -           | 2             |                           |
| 205 | Duo Cone Seal Installer;PN.1U6436       |                   | -            | 1           | -           | -           | -           | -           | 1             |                           |
| 206 | Duo Cone Seal Installer;PN.8T0531       |                   | -            | -           | -           | -           | -           | -           | 0             |                           |
| 207 | Duo Cone Seal Installer;PN.1U6487       |                   | 1            | -           | -           | -           | -           | -           | 1             |                           |

| No  | Jenis                       | Kategori                      | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|-----------------------------|-------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 208 | Crimping Tool               |                               | -            | -           | 1           | 1           | 2           | 1           | 5             |                           |
| 209 | Tool Nozzle Remover         |                               | -            | 1           | 1           | 1           | 1           | -           | 4             |                           |
| 210 | Crimping Tool Electric      |                               | 2            |             | 1           | -           | 2           | 2           | 7             |                           |
| 211 | Amplas 1000                 | Abrasive                      | 7            | 4           | 8           | 5           | 8           | 7           | 39            | 148                       |
| 212 | Amplas 800                  |                               | 1            | 1           | -           | 4           | -           | 1           | 7             |                           |
| 213 | Amplas 600                  |                               | 1            | -           | 1           | 1           | 1           | 1           | 5             |                           |
| 214 | Amplas 400                  |                               | 1            | -           | 1           | -           | -           | 1           | 3             |                           |
| 215 | Amplas 80                   |                               | 4            | 1           | 2           | 4           | 6           | 3           | 20            |                           |
| 216 | Kuas 4                      |                               | 2            | -           | -           | 1           | 1           | 1           | 5             |                           |
| 217 | Kuas 2                      |                               | -            | 1           | 1           | 2           | 3           | 4           | 11            |                           |
| 218 | Kuas 1                      |                               | -            | -           | -           | 2           | -           | 1           | 3             |                           |
| 219 | Sikat kawat besi            |                               | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 220 | Sikat Kawat Kuningan        |                               | -            | 1           | 2           | 2           | 3           | 2           | 10            |                           |
| 221 | Sender Kasar Besi           |                               | 1            | -           | 1           | 1           | 1           | -           | 4             |                           |
| 222 | Sender Halus Aluminium      |                               | 1            | 1           | 4           | 4           | 2           | 3           | 15            |                           |
| 223 | End Cup Brush Brush Krisbow |                               | -            | -           | 3           | 1           | -           | 2           | 6             |                           |
| 224 | Mata gerinda botol Amplas   |                               | 1            | -           | 2           | 2           | 2           | -           | 7             |                           |
| 225 | Mata Gerinda botol Batu     |                               | -            | -           | -           | 2           | 2           | 2           | 6             |                           |
| 226 | Mata gerinda potong         |                               | -            | -           | -           | -           | 1           | 2           | 3             |                           |
| 227 | Grinding Stone 10 PCS       |                               | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 228 | Holder Pad                  |                               | -            | -           | -           | 1           | -           | -           | 1             |                           |
| 229 | Mata Gergaji besi           |                               | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 230 | Polishing Wheel             |                               | -            | -           | -           | -           | -           |             | 0             |                           |
| 231 | Gloves                      | Personal Protective Equipment | 92           | 74          | 69          | 66          | 104         | 65          | 470           | 504                       |

| No  | Jenis                    | Kategori          | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|--------------------------|-------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 232 | Ear Plug                 |                   | 2            | 1           | -           | 3           | 3           | -           | 9             |                           |
| 233 | Sarung Tangan Karet      |                   | 1            | 2           | 1           | 3           | 3           | 2           | 12            |                           |
| 234 | Masker N95               |                   | -            | -           | 1           | 3           | 3           | 2           | 9             |                           |
| 235 | Gloves Assembly          |                   | -            | -           | -           | 1           | -           | -           | 1             |                           |
| 236 | Filter Masker Respirator |                   | -            | -           | -           | -           | -           | -           | 0             |                           |
| 237 | Life Jacket              |                   |              |             |             |             | 1           | 2           | 3             |                           |
| 238 | Isolasi Electric         | Office Stationery | 4            | 1           | 1           | 2           | -           | -           | 8             | 379                       |
| 239 | Lakban Bening            |                   | -            | 1           | -           | 1           | 2           | 1           | 5             |                           |
| 240 | Lakban Kuning            |                   | -            | 1           | -           | -           | 2           | 1           | 4             |                           |
| 241 | lakban kertas            |                   | 1            | 1           | 2           | 2           | -           | -           | 6             |                           |
| 242 | Isolasi Rubber           |                   | -            | -           | -           | -           | -           | -           | 0             |                           |
| 243 | Black Marker             |                   | 1            | 1           | 1           | 1           | 1           | 1           | 6             |                           |
| 244 | White Marker             |                   | 3            | 12          | 12          | 14          | 14          | 12          | 67            |                           |
| 245 | Battery Alkaline 9 Volt  |                   | -            | 1           | 1           | -           | -           | 1           | 3             |                           |
| 246 | Battery Alkaline AAA     |                   | -            | -           | 1           | 1           | 1           | 2           | 5             |                           |
| 247 | Battery Alkaline AA      |                   | -            | 1           | 1           | -           | -           | 1           | 3             |                           |
| 248 | Cable Tie                |                   | 7            | 1           | 7           | 8           | 4           | 10          | 37            |                           |
| 249 | Tali Rafia               |                   | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 250 | Seal Tape                |                   | 1            | 2           | 1           | 1           | -           | 1           | 6             |                           |
| 251 | Plastic Clip             |                   | 8            | 9           | 16          | 7           | 20          | 11          | 71            |                           |
| 252 | Trash Bag                |                   | 28           | 23          | 26          | 26          | 33          | 20          | 156           |                           |
| 253 | Plasgase                 |                   | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 254 | Wypall                   | Absorbent Product | 92           | 73          | 72          | 22          | 105         | 68          | 432           | 735                       |
| 255 | Absorbent                |                   | 28           | 52          | 48          | 50          | 74          | 51          | 303           |                           |

| No  | Jenis                                       | Kategori           | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|---------------------------------------------|--------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 256 | CRC Contact Cleaner                         | Paint And Chemical | 15           | 27          | 29          | 29          | 26          | 18          | 144           | 390                       |
| 257 | WD-40                                       |                    | 28           | 13          | 10          | 20          | 10          | 6           | 87            |                           |
| 258 | Lem besi                                    |                    | 1            | -           | -           | -           | -           | -           | 1             |                           |
| 259 | Lem Epoxy Pionner                           |                    | -            | -           | -           | -           | -           | -           | -             |                           |
| 260 | Lem kaca Sealent Silikon bening             |                    | -            | -           | -           | -           | -           | 1           | 1             |                           |
| 261 | Cleaner Penetrant Remover                   |                    | -            | -           | -           | -           | 1           | 2           | 3             |                           |
| 262 | Penetrant                                   |                    | 1            | -           | -           | 1           | 1           | 3           | 6             |                           |
| 263 | Developer                                   |                    | 1            | -           | -           | 1           | 1           | 3           | 6             |                           |
| 264 | Avian Paint Removver Besar                  |                    | -            | -           | -           | 2           | 3           |             | 5             |                           |
| 265 | Autosol Metal polish / Pembersih Logam      |                    | -            | -           | -           | -           | -           | 2           | 2             |                           |
| 266 | Oil Compressor AC / Refrigeration Lubricant |                    | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 267 | Thinner                                     |                    | 1            | 1           | 2           | 2           | 4           | 5           | 15            |                           |
| 268 | Anti Rush                                   |                    | 3            | 2           | 1           | 1           | 1           | 1           | 9             |                           |
| 269 | RenoClean                                   |                    | 3            | 2           | 1           | 1           | 1           | 1           | 9             |                           |
| 270 | Yellow Paint                                |                    | -            | -           | -           | -           | 1           | 1           | 2             |                           |
| 271 | Freon AC                                    |                    | -            | 1           | -           | 1           | -           | 1           | 3             |                           |
| 272 | Eonhand Waterless                           |                    | -            | 1           | -           | 1           | 1           | 1           | 4             |                           |
| 273 | Oil SAE 15W-40                              |                    | -            | -           | 6           | 7           | 9           | 12          | 34            |                           |
| 274 | Grease                                      |                    | -            | -           | -           | -           | 2           | 1           | 3             |                           |
| 275 | Loctite Antisize                            |                    | -            | -           | 2           | 1           | 2           | 2           | 7             |                           |
| 276 | Loctite Gasket Dressing                     |                    | 1            | 1           | 3           | 2           | 1           | 1           | 9             |                           |
| 277 | Loctite Black Silicone gasket Marker RTV    |                    | -            | -           | -           | -           | 1           | 2           | 3             |                           |

| No  | Jenis                                          | Kategori            | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-----|------------------------------------------------|---------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 278 | Loctite Thread Sealant (577)                   | Packing Supplies    | -            | -           | 1           | -           | -           | -           | 1             | 92                        |
| 279 | Loctite High Flex gasket marker                |                     | -            | 1           | -           | 1           | 2           | 1           | 5             |                           |
| 280 | Loctite Flange Sealent Blue RTV SI 587         |                     | -            | -           | -           | 1           | 1           | 1           | 3             |                           |
| 281 | Loctite Gasket Eliminator Flange Sealent (515) |                     | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 282 | Loctite Lem Silicone Gasket Loctite (SI 598)   |                     | -            | -           | -           | -           | -           | -           | 0             |                           |
| 283 | Loctite Contact Adhesive (30540)               |                     | -            | -           | -           | -           | -           | -           | 0             |                           |
| 284 | Loctite Thread Sealing (545)                   |                     | -            | -           | 1           | -           | -           | -           | 1             |                           |
| 285 | Loctite Retaining Compound (609)               |                     | -            | 1           | 1           | 1           | 1           | 2           | 6             |                           |
| 286 | Loctite Thread Lock ( 271 )                    |                     | -            | 4           | 3           | 3           | 5           | 2           | 17            |                           |
| 287 | Loctite Thread Lock ( 242 )                    |                     | -            | 1           | -           | -           | -           | -           | 1             |                           |
| 288 | Loctite Thread Lock ( 243 )                    |                     | -            | -           | -           | -           | 1           | -           | 1             |                           |
| 289 | Loctite HI-Tack gasket Sealent (MR 5009)       |                     | -            | -           | -           | -           | -           | -           | 0             |                           |
| 290 | Loctite Repair Compound (MR 2000)              |                     | -            | -           | -           | -           | -           | -           | 0             |                           |
| 291 | Clamp Sealing Machine                          | Packing Supplies    | 1            | -           | 1           | -           | -           | 1           | 3             | 92                        |
| 292 | Steel Band Packing Tool                        |                     | -            | 1           | -           | 1           | 1           | 1           | 4             |                           |
| 293 | Plate Banding                                  |                     | 1            | 1           | -           | -           | -           | -           | 2             |                           |
| 294 | Plastic Bakar                                  |                     | -            | -           | 3           | -           | 4           | 2           | 9             |                           |
| 295 | Wrapping                                       |                     | 14           | 10          | 11          | 10          | 10          | 10          | 65            |                           |
| 296 | Terpal                                         |                     | -            | 1           | 1           | -           | 2           | 5           | 9             |                           |
| 297 | Rethreading Dies                               | Metal Cutting Tools | 1            | 3           | 1           | -           | 1           | -           | 6             | 39                        |
| 298 | Tap Size Set                                   |                     | -            | 1           | -           | 2           | 1           | -           | 4             |                           |

| No    | Jenis                | Kategori                | FREQ<br>JULY | FREQ<br>AUG | FREQ<br>SEP | FREQ<br>OCT | FREQ<br>NOV | FREQ<br>DEC | TOTAL<br>FREQ | TOTAL<br>FREQ<br>KATEGORI |
|-------|----------------------|-------------------------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------------------|
| 299   | Hand Taps 3          |                         | 3            | 3           |             | 2           | 1           | -           | 9             |                           |
| 300   | Tap Die Set          |                         | 2            | 2           | 1           | 1           | 1           | 1           | 8             |                           |
| 301   | Drill bit set        |                         |              | 1           |             |             | 1           | 3           | 5             |                           |
| 302   | Stud Remover Inch    |                         | -            | 1           | 2           | 1           | -           | -           | 4             |                           |
| 303   | Stud Remover mili    |                         | -            | -           | 2           | -           | 1           | -           | 3             |                           |
| 304   | Battery Charging     | Batteries And Equipment | 1            | 4           | 5           | 3           | 2           | 4           | 19            | 26                        |
| 305   | Booster Cable Jumper |                         | 1            | 3           | 1           | 2           | -           | -           | 7             |                           |
| 306   | LED Head Light       | Lighting And Electrical | 1            | 1           |             | -           | 2           | 4           | 8             | 17                        |
| 307   | Worklamp             |                         | 1            | 1           | 1           | -           | 2           | -           | 5             |                           |
| 308   | Slim Light           |                         | -            | -           | 2           | -           | 1           | 1           | 4             |                           |
| Total |                      |                         | 1039         | 1068        | 1051        | 1072        | 1257        | 1229        | 6716          | 6716                      |

POLITEKNIK SINAR MAS  
BERAU COAL

Lampiran 2 Jarak Tempuh *tools* dan *consumable*

| No | Jenis                         | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|----|-------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 1  | Torque wrench 100 lbft        | 70        | 6,57                    | 459,9                         | 6,57                  | 459,9                       |
| 2  | Torque wrench 250 lbft        | 70        | 6,57                    | 459,9                         | 6,57                  | 459,9                       |
| 3  | Torque wrench 600 lbft        | 45        | 5,68                    | 255,6                         | 4,38                  | 197,1                       |
| 4  | Torque wrench 1000 lbft       | 43        | 5,68                    | 244,24                        | 4,38                  | 188,34                      |
| 5  | Transmission pressure grup    | 42        | 5,68                    | 238,56                        | 4,38                  | 183,96                      |
| 6  | Bearing Puller cup            | 6         | 6,37                    | 38,22                         | 7,07                  | 42,42                       |
| 7  | Piston ring compressor        | 2         | 6,37                    | 12,74                         | 6,37                  | 12,74                       |
| 8  | Piston ring expander          | 1         | 6,37                    | 6,37                          | 6,37                  | 6,37                        |
| 9  | Valve spring compressor       | 12        | 6,37                    | 76,44                         | 6,37                  | 76,44                       |
| 10 | Bearing puller attachment     | 4         | 5,68                    | 22,72                         | 3,08                  | 12,32                       |
| 11 | Puller Three jaw 11 In        | 2         | 5,68                    | 11,36                         | 4,38                  | 8,76                        |
| 12 | Puller three jaw 8 In         | 6         | 6,37                    | 38,22                         | 7,07                  | 42,42                       |
| 13 | Puller two jaw 4 in           | 3         | 6,37                    | 19,11                         | 7,07                  | 21,21                       |
| 14 | Fuel Set                      | 0         | 6,60                    | 0                             | 4,38                  | 0                           |
| 15 | Nitrogen Accumulator charging | 0         | 6,60                    | 0                             | 8,37                  | 0                           |
| 16 | tool suspensi                 | 13        | 6,60                    | 85,8                          | 5,30                  | 68,9                        |
| 17 | plug hose                     | 0         | 5,68                    | 0                             | 4,38                  | 0                           |
| 18 | Hose Cleaning projectile gp   | 25        | 6,98                    | 174,5                         | 4,38                  | 109,5                       |
| 19 | Hose Grup                     | 42        | 6,98                    | 293,16                        | 4,38                  | 183,96                      |
| 20 | Belt 1 ton                    | 61        | 5,30                    | 323,3                         | 6,37                  | 388,57                      |
| 21 | Link Bracket 3/8              | 45        | 5,30                    | 238,5                         | 7,07                  | 318,15                      |
| 22 | Belt 2 ton                    | 56        | 5,30                    | 296,8                         | 6,37                  | 356,72                      |
| 23 | Link Bracket 1/2              | 49        | 5,30                    | 259,7                         | 7,07                  | 346,43                      |
| 24 | Link Bracket 3/4              | 42        | 5,30                    | 222,6                         | 7,07                  | 296,94                      |
| 25 | Sackle 2 ton                  | 42        | 5,30                    | 222,6                         | 7,07                  | 296,94                      |
| 26 | Sackle 3 ton                  | 47        | 5,30                    | 249,1                         | 7,07                  | 332,29                      |
| 27 | Belt 4 ton                    | 39        | 5,30                    | 206,7                         | 6,37                  | 248,43                      |
| 28 | Belt 3 ton                    | 23        | 5,30                    | 121,9                         | 6,37                  | 146,51                      |
| 29 | Link Bracket 1"               | 12        | 5,30                    | 63,6                          | 7,07                  | 84,84                       |
| 30 | Eye Bolt M16                  | 7         | 5,30                    | 37,1                          | 7,77                  | 54,39                       |
| 31 | Eye Bolt M 24                 | 7         | 5,30                    | 37,1                          | 7,77                  | 54,39                       |
| 32 | Eye Bolt M10                  | 15        | 5,30                    | 79,5                          | 7,77                  | 116,55                      |
| 33 | Eye Bolt M12                  | 7         | 5,30                    | 37,1                          | 7,77                  | 54,39                       |
| 34 | Eye Bolt 3/4                  | 11        | 5,30                    | 58,3                          | 7,77                  | 85,47                       |
| 35 | Eye Bolt 3/8                  | 14        | 5,30                    | 74,2                          | 7,77                  | 108,78                      |
| 36 | Eye Bolt 1/2                  | 17        | 5,30                    | 90,1                          | 7,77                  | 132,09                      |
| 37 | Sackle 8 ton                  | 6         | 5,30                    | 31,8                          | 7,07                  | 42,42                       |
| 38 | Lever Block                   | 11        | 5,30                    | 58,3                          | 7,77                  | 85,47                       |
| 39 | Eye Bolt M 20                 | 7         | 5,30                    | 37,1                          | 7,77                  | 54,39                       |
| 40 | eye bolt 7/16                 | 7         | 5,30                    | 37,1                          | 7,77                  | 54,39                       |

| No | Jenis                          | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|----|--------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 41 | Sackle 6 ton                   | 8         | 5,30                    | 42,4                          | 7,47                  | 59,76                       |
| 42 | Eye Bolt 5/8                   | 10        | 5,30                    | 53                            | 7,77                  | 77,7                        |
| 43 | Load Leveler;2.7 t             | 2         | 4,38                    | 8,76                          | 5,30                  | 10,6                        |
| 44 | Safety Air Gun                 | 38        | 6,37                    | 242,06                        | 7,07                  | 268,66                      |
| 45 | Gerinda Botol                  | 43        | 6,37                    | 273,91                        | 7,77                  | 334,11                      |
| 46 | Air Impact Wrench 1/2          | 35        | 6,37                    | 222,95                        | 7,77                  | 271,95                      |
| 47 | Air Impact Wrench 1"           | 23        | 6,37                    | 146,51                        | 6,37                  | 146,51                      |
| 48 | Compact Sender;5 in            | 29        | 6,37                    | 184,73                        | 7,77                  | 225,33                      |
| 49 | Air Impact Wrench 3/4          | 24        | 6,37                    | 152,88                        | 6,37                  | 152,88                      |
| 50 | Air Impact Wrench 3/8          | 23        | 6,37                    | 146,51                        | 7,77                  | 178,71                      |
| 51 | Tyre Pressure Gun              | 15        | 6,37                    | 95,55                         | 7,77                  | 116,55                      |
| 52 | Air Engraving Pen              | 7         | 6,37                    | 44,59                         | 7,07                  | 49,49                       |
| 53 | Safety Air Gun Long            | 26        | 6,37                    | 165,62                        | 6,37                  | 165,62                      |
| 54 | Spet Compressor                | 4         | 6,37                    | 25,48                         | 7,77                  | 31,08                       |
| 55 | Greece Gun                     | 9         | 6,37                    | 57,33                         | 7,77                  | 69,93                       |
| 56 | Hose spiral Compressor         | 9         | 6,37                    | 57,33                         | 7,77                  | 69,93                       |
| 57 | Cleaning gun                   | 1         | 6,37                    | 6,37                          | 7,77                  | 7,77                        |
| 58 | Honning Tool                   | 0         | 6,37                    | 0                             | 7,77                  | 0                           |
| 59 | ET Tool & COM Adapter          | 211       | 3,08                    | 649,88                        | 5,30                  | 1118,3                      |
| 60 | Tetra gauge ; 0-5800 psi       | 82        | 3,08                    | 252,56                        | 5,68                  | 465,76                      |
| 61 | Multi Tool                     | 28        | 3,08                    | 86,24                         | 3,08                  | 86,24                       |
| 62 | Tool Blowby                    | 28        | 3,08                    | 86,24                         | 3,08                  | 86,24                       |
| 63 | Engine Pressure test           | 16        | 3,08                    | 49,28                         | 4,38                  | 70,08                       |
| 64 | Digital Battery Analyzer       | 11        | 3,08                    | 33,88                         | 5,68                  | 62,48                       |
| 65 | Digital Pressure Indicator     | 2         | 3,08                    | 6,16                          | 6,57                  | 13,14                       |
| 66 | Compression test kit           | 1         | 3,08                    | 3,08                          | 4,38                  | 4,38                        |
| 67 | Digital Multimeter             | 130       | 5,30                    | 689                           | 6,57                  | 854,1                       |
| 68 | Infrared Thermometer           | 69        | 5,30                    | 365,7                         | 6,57                  | 453,33                      |
| 69 | Digital Tachometer             | 38        | 3,08                    | 117,04                        | 6,57                  | 249,66                      |
| 70 | Lowcost Blowby                 | 8         | 3,08                    | 24,64                         | 7,47                  | 59,76                       |
| 71 | Insulation Testing             | 0         | 5,30                    | 0                             | 6,57                  | 0                           |
| 72 | Continuity Testing             | 0         | 5,30                    | 0                             | 6,57                  | 0                           |
| 73 | Bore scope                     | 1         | 3,08                    | 3,08                          | 7,47                  | 7,47                        |
| 74 | Cable Ethernet                 | 5         | 5,30                    | 26,5                          | 6,57                  | 32,85                       |
| 75 | Clamp On Meter                 | 2         | 5,30                    | 10,6                          | 8,37                  | 16,74                       |
| 76 | Vernier Calliper               | 28        | 6,37                    | 178,36                        | 7,07                  | 197,96                      |
| 77 | Micrometer Outside 25-50 mm    | 26        | 6,37                    | 165,62                        | 7,07                  | 183,82                      |
| 78 | Metric Dial Indicator          | 21        | 5,78                    | 121,38                        | 6,57                  | 137,97                      |
| 79 | Vernier Calliper Digital       | 26        | 6,37                    | 165,62                        | 7,07                  | 183,82                      |
| 80 | Depth micrometer 9 In          | 24        | 6,37                    | 152,88                        | 6,37                  | 152,88                      |
| 81 | Linner Projection indicator gp | 14        | 6,57                    | 91,98                         | 6,57                  | 91,98                       |
| 82 | Micrometer Outside 100-125 mm  | 19        | 6,37                    | 121,03                        | 7,07                  | 134,33                      |

| No  | Jenis                                | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-----|--------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 83  | Micrometer Outside 1-25 mm           | 13        | 6,37                    | 82,81                         | 7,07                  | 91,91                       |
| 84  | Micrometer Outside 50-75 mm          | 8         | 6,37                    | 50,96                         | 7,07                  | 56,56                       |
| 85  | Micrometer Outside 125-150 mm        | 7         | 6,37                    | 44,59                         | 7,07                  | 49,49                       |
| 86  | Micrometer Outside 25-50 mm          | 26        | 6,37                    | 165,62                        | 7,07                  | 183,82                      |
| 87  | Thread Identification kit            | 6         | 6,57                    | 39,42                         | 6,57                  | 39,42                       |
| 88  | Metric Dial Bore Gauge               | 6         | 5,78                    | 34,68                         | 7,47                  | 44,82                       |
| 89  | Dial Vernier Caliper                 | 7         | 6,37                    | 44,59                         | 7,07                  | 49,49                       |
| 90  | Tubular Inside Micrometer;Multitoyo  | 5         | 6,37                    | 31,85                         | 7,07                  | 35,35                       |
| 91  | Tool Waterpass                       | 1         | 6,37                    | 6,37                          | 7,07                  | 7,07                        |
| 92  | Combination Mili Set                 | 110       | 5,30                    | 583                           | 7,07                  | 777,7                       |
| 93  | Metric Socket set;3/8 in dr; 12 pt   | 108       | 5,30                    | 572,4                         | 7,07                  | 763,56                      |
| 94  | Allen Key Metric;Krisbow             | 91        | 5,30                    | 482,3                         | 6,57                  | 597,87                      |
| 95  | Allen Key Inch;Krisbow               | 88        | 5,30                    | 466,4                         | 6,57                  | 578,16                      |
| 96  | Combination Wrench grup              | 83        | 5,30                    | 439,9                         | 6,37                  | 528,71                      |
| 97  | Allen Key torx;Krisbow               | 77        | 5,30                    | 408,1                         | 6,57                  | 505,89                      |
| 98  | Metric socket set;1/2 in dr;10 pt    | 96        | 5,30                    | 508,8                         | 7,07                  | 678,72                      |
| 99  | Metric Hex Bit socket set            | 44        | 5,30                    | 233,2                         | 7,07                  | 311,08                      |
| 100 | Deep Socket mili set drive 3/8       | 40        | 5,30                    | 212                           | 7,07                  | 282,8                       |
| 101 | Allen Key 5/8                        | 35        | 5,30                    | 185,5                         | 6,37                  | 222,95                      |
| 102 | Extension 3/4                        | 37        | 5,30                    | 196,1                         | 7,77                  | 287,49                      |
| 103 | External Pliers Assembly             | 31        | 5,30                    | 164,3                         | 7,77                  | 240,87                      |
| 104 | Internal Pliers Assembly             | 34        | 5,30                    | 180,2                         | 7,77                  | 264,18                      |
| 105 | Copper Hammer 2 kg                   | 34        | 5,30                    | 180,2                         | 7,77                  | 264,18                      |
| 106 | Seal Pick                            | 19        | 5,30                    | 100,7                         | 7,47                  | 141,93                      |
| 107 | Adjustable Wrench                    | 29        | 5,30                    | 153,7                         | 6,37                  | 184,73                      |
| 108 | Sliding T Handle 3/4                 | 30        | 5,30                    | 159                           | 6,37                  | 191,1                       |
| 109 | Pipe Wrench 24";Sellery              | 17        | 5,30                    | 90,1                          | 6,37                  | 108,29                      |
| 110 | Copper Hammer 5 kg                   | 26        | 5,30                    | 137,8                         | 6,37                  | 165,62                      |
| 111 | Sledge Hammer;5,5 lb                 | 22        | 5,30                    | 116,6                         | 6,37                  | 140,14                      |
| 112 | Ratchet drive 3/4                    | 18        | 5,30                    | 95,4                          | 6,37                  | 114,66                      |
| 113 | Adapter 3/4 to 1                     | 17        | 5,30                    | 90,1                          | 7,77                  | 132,09                      |
| 114 | Adapter 3/4 to 1/2                   | 18        | 5,30                    | 95,4                          | 7,77                  | 139,86                      |
| 115 | Pipe Wrench 36 In                    | 15        | 5,30                    | 79,5                          | 6,37                  | 95,55                       |
| 116 | Sliding T handle 1"                  | 16        | 5,30                    | 84,8                          | 6,37                  | 101,92                      |
| 117 | Pin Punch Set; 7 pc                  | 8         | 5,30                    | 42,4                          | 7,47                  | 59,76                       |
| 118 | Dial Torque wrench;3/8 in dr;50 Lbft | 19        | 5,30                    | 100,7                         | 6,57                  | 124,83                      |
| 119 | Extension 1 in                       | 17        | 5,30                    | 90,1                          | 7,77                  | 132,09                      |
| 120 | Adapter 1 to 3/4                     | 15        | 5,30                    | 79,5                          | 7,77                  | 116,55                      |
| 121 | L Handle 3/4                         | 9         | 5,30                    | 47,7                          | 6,37                  | 57,33                       |

| No  | Jenis                                     | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-----|-------------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 122 | Snap Ring Kotak                           | 8         | 5,30                    | 42,4                          | 7,77                  | 62,16                       |
| 123 | Socket Bintang Male                       | 4         | 5,30                    | 21,2                          | 7,47                  | 29,88                       |
| 124 | External Retaining Ring Pliers            | 11        | 5,30                    | 58,3                          | 7,77                  | 85,47                       |
| 125 | Socket Bintang female                     | 7         | 5,30                    | 37,1                          | 7,47                  | 52,29                       |
| 126 | Breaker Bar dr 3/4                        | 6         | 5,30                    | 31,8                          | 7,07                  | 42,42                       |
| 127 | Pry Bar                                   | 6         | 5,30                    | 31,8                          | 1,85                  | 11,1                        |
| 128 | Torsimeter Dr 3/4                         | 6         | 5,30                    | 31,8                          | 4,38                  | 26,28                       |
| 129 | Snap Ring SPI Inner; Sellery              | 5         | 5,30                    | 26,5                          | 7,77                  | 38,85                       |
| 130 | Needle Nose Pliers                        | 6         | 5,30                    | 31,8                          | 7,77                  | 46,62                       |
| 131 | L Handle 1"                               | 3         | 5,30                    | 15,9                          | 6,37                  | 19,11                       |
| 132 | Internal Retaining Ring Pliers;PN.1361452 | 6         | 5,30                    | 31,8                          | 7,77                  | 46,62                       |
| 133 | Ratcheting Combination Wrench             | 4         | 5,30                    | 21,2                          | 9,27                  | 37,08                       |
| 134 | Dial torque wrench;1/2 in dr;175 lbft     | 1         | 5,30                    | 5,3                           | 6,57                  | 6,57                        |
| 135 | Snap Ring SPI Outher                      | 1         | 5,30                    | 5,3                           | 7,77                  | 7,77                        |
| 136 | Socket grup dr 3/4                        | 82        | 5,30                    | 434,6                         | 5,68                  | 465,76                      |
| 137 | Socket grup dr 1                          | 83        | 5,30                    | 439,9                         | 5,68                  | 471,44                      |
| 138 | HD socket set;3/4                         | 7         | 4,38                    | 30,66                         | 5,30                  | 37,1                        |
| 139 | HD socket Set; 17 pc; 1 in dr             | 4         | 4,38                    | 17,52                         | 5,30                  | 21,2                        |
| 140 | Turning Tool                              | 77        | 5,30                    | 408,1                         | 7,47                  | 575,19                      |
| 141 | Feeler Gage Z                             | 73        | 5,30                    | 386,9                         | 7,47                  | 545,31                      |
| 142 | Turning Tool grader                       | 12        | 5,30                    | 63,6                          | 7,47                  | 89,64                       |
| 143 | Vaccum Pump                               | 77        | 5,30                    | 408,1                         | 7,77                  | 598,29                      |
| 144 | Filter Strap                              | 82        | 5,30                    | 434,6                         | 7,77                  | 637,14                      |
| 145 | Injector High Gauge                       | 69        | 5,30                    | 365,7                         | 7,77                  | 536,13                      |
| 146 | Induction Heaters                         | 21        | 3,08                    | 64,68                         | 3,08                  | 64,68                       |
| 147 | Stud                                      | 17        | 5,30                    | 90,1                          | 6,37                  | 108,29                      |
| 148 | Valve Seat Extractor                      | 21        | 4,38                    | 91,98                         | 4,38                  | 91,98                       |
| 149 | Gauge Valve Last Adjusment                | 18        | 4,38                    | 78,84                         | 5,68                  | 102,24                      |
| 150 | Timming and Fuel Setting Grup             | 12        | 4,38                    | 52,56                         | 5,68                  | 68,16                       |
| 151 | Filter Chain                              | 1         | 5,30                    | 5,3                           | 6,37                  | 6,37                        |
| 152 | Valve Spring                              | 15        | 4,38                    | 65,7                          | 6,37                  | 95,55                       |
| 153 | Piston Ring Groove Gauge GONOGO           | 8         | 5,30                    | 42,4                          | 7,47                  | 59,76                       |
| 154 | Tool Axle Shaft                           | 6         | 4,38                    | 26,28                         | 4,38                  | 26,28                       |
| 155 | Valve Spring Tester                       | 0         | 4,38                    | 0                             | 5,68                  | 0                           |
| 156 | Tool Sleeve Injector                      | 4         | 4,38                    | 17,52                         | 5,68                  | 22,72                       |
| 157 | Turning Tool Big                          | 8         | 5,30                    | 42,4                          | 7,07                  | 56,56                       |
| 158 | Pressurizing pump Tool                    | 3         | 5,30                    | 15,9                          | 7,77                  | 23,31                       |
| 159 | Remove Linner                             | 6         | 4,38                    | 26,28                         | 4,38                  | 26,28                       |
| 160 | Tool Timming Calibration                  | 4         | 4,38                    | 17,52                         | 5,68                  | 22,72                       |

| No  | Jenis                                 | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-----|---------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 161 | Sheel Cranksaft Engine C15            | 4         | 4,38                    | 17,52                         | 6,98                  | 27,92                       |
| 162 | Sheel Crankshaft C13                  | 4         | 4,38                    | 17,52                         | 6,98                  | 27,92                       |
| 163 | Cylinder Install Linner               | 3         | 5,30                    | 15,9                          | 6,37                  | 19,11                       |
| 164 | Extractor seal crankshaft             | 2         | 4,38                    | 8,76                          | 6,98                  | 13,96                       |
| 165 | Sheel Crankshaft;PN.5639214           | 4         | 4,38                    | 17,52                         | 6,98                  | 27,92                       |
| 166 | Sheel Crankshaft Rear C9              | 3         | 4,38                    | 13,14                         | 6,98                  | 20,94                       |
| 167 | seal crankshaft front<br>PN;6V6142    | 2         | 4,38                    | 8,76                          | 6,98                  | 13,96                       |
| 168 | Sheel Crankshaft Rear 3306            | 1         | 4,38                    | 4,38                          | 6,98                  | 6,98                        |
| 169 | Sheel Crankshaft<br>3400;PN.6V6143    | 3         | 4,38                    | 13,14                         | 6,98                  | 20,94                       |
| 170 | Scissor piston ring compressor        | 2         | 5,30                    | 10,6                          | 7,07                  | 14,14                       |
| 171 | AC Charging And Test gp               | 15        | 6,60                    | 99                            | 4,38                  | 65,7                        |
| 172 | Vaccum AC                             | 1         | 6,60                    | 6,6                           | 1,85                  | 1,85                        |
| 173 | Hyd Hand Pump                         | 7         | 5,68                    | 39,76                         | 5,68                  | 39,76                       |
| 174 | Driver Plate Gp                       | 11        | 5,68                    | 62,48                         | 3,08                  | 33,88                       |
| 175 | Manual Hydraulic Pump                 | 10        | 5,68                    | 56,8                          | 5,68                  | 56,8                        |
| 176 | Cylinder Jack 80 ton                  | 9         | 5,78                    | 52,02                         | 5,78                  | 52,02                       |
| 177 | Cylinder Jack 30 ton                  | 6         | 5,78                    | 34,68                         | 5,78                  | 34,68                       |
| 178 | Bearing Puller Assy                   | 9         | 5,68                    | 51,12                         | 3,08                  | 27,72                       |
| 179 | Electric Hand Pump                    | 9         | 5,68                    | 51,12                         | 5,68                  | 51,12                       |
| 180 | Hi Torque                             | 13        | 5,78                    | 75,14                         | 5,78                  | 75,14                       |
| 181 | Tool Press Piston                     | 10        | 5,68                    | 56,8                          | 4,38                  | 43,8                        |
| 182 | Bearing Puller;20 t                   | 4         | 5,68                    | 22,72                         | 3,08                  | 12,32                       |
| 183 | Cylinder jack 100 ton                 | 2         | 5,78                    | 11,56                         | 7,08                  | 14,16                       |
| 184 | Puller Screw;PN.8S2264                | 2         | 6,57                    | 13,14                         | 6,57                  | 13,14                       |
| 185 | H-bar                                 | 9         | 5,68                    | 51,12                         | 5,68                  | 51,12                       |
| 186 | Bearing camshaft remover              | 6         | 5,68                    | 34,08                         | 5,68                  | 34,08                       |
| 187 | Tool Baji wedge                       | 3         | 6,37                    | 19,11                         | 6,37                  | 19,11                       |
| 188 | Power Inverter                        | 21        | 5,78                    | 121,38                        | 6,57                  | 137,97                      |
| 189 | Extension Cable                       | 20        | 6,37                    | 127,4                         | 7,77                  | 155,4                       |
| 190 | Cable Roll                            | 16        | 6,37                    | 101,92                        | 7,77                  | 124,32                      |
| 191 | Gerinda Potong                        | 11        | 6,37                    | 70,07                         | 7,77                  | 85,47                       |
| 192 | Mesin potong circular                 | 0         | 6,37                    | 0                             | 7,77                  | 0                           |
| 193 | Heat Gun                              | 12        | 6,37                    | 76,44                         | 7,77                  | 93,24                       |
| 194 | Electric Drill                        | 6         | 6,37                    | 38,22                         | 7,77                  | 46,62                       |
| 195 | Impact Cordless Dr<br>1/2;Krisbow     | 8         | 5,78                    | 46,24                         | 7,47                  | 59,76                       |
| 196 | Cordless Impact Drill;Krisbow         | 7         | 5,78                    | 40,46                         | 7,47                  | 52,29                       |
| 197 | Torque Multiplier gp                  | 26        | 6,98                    | 181,48                        | 3,08                  | 80,08                       |
| 198 | Duo Cone Seal Installer;<br>PN.4C6582 | 2         | 7,08                    | 14,16                         | 7,07                  | 14,14                       |
| 199 | Duo Cone Seal<br>Installer;PN.1293944 | 0         | 7,08                    | 0                             | 7,07                  | 0                           |

| No  | Jenis                                | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-----|--------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 200 | R&I Shift Gear Nut Spanner;PN.6V3158 | 4         | 7,07                    | 28,28                         | 7,47                  | 29,88                       |
| 201 | Duo Cone Seal Installer;PN.1407642   | 1         | 7,08                    | 7,08                          | 7,07                  | 7,07                        |
| 202 | Duo Cone Seal Installer;PN.2858787   | 2         | 7,08                    | 14,16                         | 7,07                  | 14,14                       |
| 203 | Duo Cone Seal Installer;PN.9U3691    | 3         | 7,08                    | 21,24                         | 7,07                  | 21,21                       |
| 204 | Duo Cone Seal Installer;PN.8T9206    | 2         | 7,08                    | 14,16                         | 7,07                  | 14,14                       |
| 205 | Duo Cone Seal Installer;PN.1U6436    | 1         | 7,08                    | 7,08                          | 7,07                  | 7,07                        |
| 206 | Duo Cone Seal Installer;PN.8T0531    | 0         | 7,08                    | 0                             | 7,07                  | 0                           |
| 207 | Duo Cone Seal Installer;PN.1U6487    | 1         | 7,08                    | 7,08                          | 7,07                  | 7,07                        |
| 208 | Crimping Tool                        | 5         | 7,47                    | 37,35                         | 6,57                  | 32,85                       |
| 209 | Tool Noozle Remover                  | 4         | 7,47                    | 29,88                         | 7,47                  | 29,88                       |
| 210 | Crimping Tool Electric               | 7         | 7,47                    | 52,29                         | 6,57                  | 45,99                       |
| 211 | Amplas 1000                          | 39        | 5,74                    | 223,86                        | 1,85                  | 72,15                       |
| 212 | Amplas 800                           | 7         | 5,74                    | 40,18                         | 1,85                  | 12,95                       |
| 213 | Amplas 600                           | 5         | 5,74                    | 28,7                          | 1,85                  | 9,25                        |
| 214 | Amplas 400                           | 3         | 5,74                    | 17,22                         | 1,85                  | 5,55                        |
| 215 | Amplas 80                            | 20        | 5,74                    | 114,8                         | 1,85                  | 37                          |
| 216 | Kuas 4                               | 5         | 5,52                    | 27,6                          | 5,52                  | 27,6                        |
| 217 | Kuas 2                               | 11        | 5,52                    | 60,72                         | 5,52                  | 60,72                       |
| 218 | Kuas 1                               | 3         | 5,52                    | 16,56                         | 5,52                  | 16,56                       |
| 219 | Sikat kawat besi                     | 1         | 5,74                    | 5,74                          | 5,74                  | 5,74                        |
| 220 | Sikat Kawat Kuningan                 | 10        | 5,74                    | 57,4                          | 5,74                  | 57,4                        |
| 221 | Sender Kasar Besi                    | 4         | 5,74                    | 22,96                         | 5,74                  | 22,96                       |
| 222 | Sender Halus Aluminium               | 15        | 5,74                    | 86,1                          | 5,74                  | 86,1                        |
| 223 | End Cup Brush Brush Krisbow          | 6         | 5,74                    | 34,44                         | 5,74                  | 34,44                       |
| 224 | Mata gerinda botol Amplas            | 7         | 5,74                    | 40,18                         | 5,74                  | 40,18                       |
| 225 | Mata Gerinda botol Batu              | 6         | 5,74                    | 34,44                         | 5,74                  | 34,44                       |
| 226 | Mata gerinda potong                  | 3         | 5,74                    | 17,22                         | 5,74                  | 17,22                       |
| 227 | Grinding Stone 10 PCS                | 1         | 5,74                    | 5,74                          | 5,74                  | 5,74                        |
| 228 | Holder Pad                           | 1         | 5,74                    | 5,74                          | 5,74                  | 5,74                        |
| 229 | Mata Gergaji besi                    | 1         | 5,52                    | 5,52                          | 5,74                  | 5,74                        |
| 230 | Polishing Wheel                      | 0         | 5,52                    | 0                             | 5,74                  | 0                           |
| 231 | Glovess                              | 470       | 1,85                    | 869,5                         | 1,85                  | 869,5                       |
| 232 | Ear Plug                             | 9         | 4,18                    | 37,62                         | 5,52                  | 49,68                       |
| 233 | Sarung Tangan Karet                  | 12        | 1,85                    | 22,2                          | 5,74                  | 68,88                       |
| 234 | Masker N95                           | 9         | 4,18                    | 37,62                         | 5,74                  | 51,66                       |
| 235 | Glovess Assembly                     | 1         | 1,85                    | 1,85                          | 5,74                  | 5,74                        |
| 236 | Filter Masker Respirator             | 0         | 4,18                    | 0                             | 5,74                  | 0                           |

| No  | Jenis                                       | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-----|---------------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 237 | Life Jacket                                 | 3         | 5,30                    | 15,9                          | 9,27                  | 27,81                       |
| 238 | Isolasi Electric                            | 8         | 1,85                    | 14,8                          | 5,52                  | 44,16                       |
| 239 | Lakban Bening                               | 5         | 1,85                    | 9,25                          | 5,52                  | 27,6                        |
| 240 | Lakban Kuning                               | 4         | 1,85                    | 7,4                           | 5,52                  | 22,08                       |
| 241 | lakban kertas                               | 6         | 1,85                    | 11,1                          | 5,52                  | 33,12                       |
| 242 | Isolasi Rubber                              | 0         | 1,85                    | 0                             | 5,52                  | 0                           |
| 243 | Black Marker                                | 6         | 1,85                    | 11,1                          | 5,52                  | 33,12                       |
| 244 | White Marker                                | 67        | 1,85                    | 123,95                        | 5,52                  | 369,84                      |
| 245 | Battery Alkaline 9 Volt                     | 3         | 1,85                    | 5,55                          | 5,52                  | 16,56                       |
| 246 | Battery Alkaline AAA                        | 5         | 1,85                    | 9,25                          | 5,52                  | 27,6                        |
| 247 | Battery Alkaline AA                         | 3         | 1,85                    | 5,55                          | 5,52                  | 16,56                       |
| 248 | Cable Tie                                   | 37        | 1,85                    | 68,45                         | 1,85                  | 68,45                       |
| 249 | Tali Rafia                                  | 1         | 1,85                    | 1,85                          | 1,85                  | 1,85                        |
| 250 | Seal Tape                                   | 6         | 1,85                    | 11,1                          | 5,52                  | 33,12                       |
| 251 | Plastic Clip                                | 71        | 1,85                    | 131,35                        | 1,85                  | 131,35                      |
| 252 | Trash Bag                                   | 156       | 1,85                    | 288,6                         | 4,18                  | 652,08                      |
| 253 | Plasgase                                    | 1         | 1,85                    | 1,85                          | 4,18                  | 4,18                        |
| 254 | Wypall                                      | 432       | 1,85                    | 799,2                         | 1,85                  | 799,2                       |
| 255 | Absorbent                                   | 303       | 1,85                    | 560,55                        | 1,85                  | 560,55                      |
| 256 | CRC Contact Cleaner                         | 144       | 5,52                    | 794,88                        | 5,52                  | 794,88                      |
| 257 | WD-40                                       | 87        | 5,52                    | 480,24                        | 5,52                  | 480,24                      |
| 258 | Lem besi                                    | 1         | 4,18                    | 4,18                          | 5,52                  | 5,52                        |
| 259 | Lem Epoxy Pionner                           | 0         | 5,52                    | 0                             | 5,52                  | 0                           |
| 260 | Lem kaca Sealent Silikon bening             | 1         | 5,52                    | 5,52                          | 4,18                  | 4,18                        |
| 261 | Cleaner Penetrant Remover                   | 3         | 5,74                    | 17,22                         | 4,18                  | 12,54                       |
| 262 | Penetrant                                   | 6         | 5,74                    | 34,44                         | 4,18                  | 25,08                       |
| 263 | Developer                                   | 6         | 5,74                    | 34,44                         | 4,18                  | 25,08                       |
| 264 | Avian Paint Removver Besar                  | 5         | 5,74                    | 28,7                          | 5,74                  | 28,7                        |
| 265 | Autosol Metal polish / Pembersih Logam      | 2         | 4,18                    | 8,36                          | 4,18                  | 8,36                        |
| 266 | Oil Compressor AC / Refrigeration Lubricant | 1         | 4,18                    | 4,18                          | 5,74                  | 5,74                        |
| 267 | Thinner                                     | 15        | 4,18                    | 62,7                          | 5,74                  | 86,1                        |
| 268 | Anti Rush                                   | 9         | 5,74                    | 51,66                         | 5,74                  | 51,66                       |
| 269 | RenoClean                                   | 9         | 5,74                    | 51,66                         | 5,74                  | 51,66                       |
| 270 | Yellow Paint                                | 2         | 4,18                    | 8,36                          | 4,18                  | 8,36                        |
| 271 | Freon AC                                    | 3         | 4,18                    | 12,54                         | 7,08                  | 21,24                       |
| 272 | Eonhand Waterless                           | 4         | 4,18                    | 16,72                         | 4,18                  | 16,72                       |
| 273 | Oil SAE 15W-40                              | 34        | 4,18                    | 142,12                        | 6,60                  | 224,4                       |
| 274 | Grease                                      | 3         | 4,18                    | 12,54                         | 4,18                  | 12,54                       |
| 275 | Loctite Antisize                            | 7         | 4,18                    | 29,26                         | 4,18                  | 29,26                       |
| 276 | Loctite Gasket Dressing                     | 9         | 4,18                    | 37,62                         | 4,18                  | 37,62                       |

| No    | Jenis                                          | Frekuensi | Jarak Gudang Usulan (M) | Total Jarak Gudang Usulan (M) | Jarak Gudang Awal (M) | Total Jarak Gudang awal (M) |
|-------|------------------------------------------------|-----------|-------------------------|-------------------------------|-----------------------|-----------------------------|
| 277   | Loctite Black Silicone gasket Marker RTV       | 3         | 4,18                    | 12,54                         | 4,18                  | 12,54                       |
| 278   | Loctite Thread Sealant (577)                   | 1         | 4,18                    | 4,18                          | 4,18                  | 4,18                        |
| 279   | Loctite High Flex gasket marker                | 5         | 4,18                    | 20,9                          | 4,18                  | 20,9                        |
| 280   | Loctite Flange Sealent Blue RTV SI 587         | 3         | 4,18                    | 12,54                         | 4,18                  | 12,54                       |
| 281   | Loctite Gasket Eliminator Flange Sealent (515) | 1         | 4,18                    | 4,18                          | 4,18                  | 4,18                        |
| 282   | Loctite Lem Silicone Gasket Loctite (SI 598)   | 0         | 4,18                    | 0                             | 4,18                  | 0                           |
| 283   | Loctite Contact Adhesive (30540)               | 0         | 4,18                    | 0                             | 4,18                  | 0                           |
| 284   | Loctite Thread Sealing (545)                   | 1         | 4,18                    | 4,18                          | 4,18                  | 4,18                        |
| 285   | Loctite Retaining Compound (609)               | 6         | 4,18                    | 25,08                         | 4,18                  | 25,08                       |
| 286   | Loctite Thread Lock ( 271 )                    | 17        | 4,18                    | 71,06                         | 4,18                  | 71,06                       |
| 287   | Loctite Thread Lock ( 242 )                    | 1         | 4,18                    | 4,18                          | 4,18                  | 4,18                        |
| 288   | Loctite Thread Lock ( 243 )                    | 1         | 4,18                    | 4,18                          | 4,18                  | 4,18                        |
| 289   | Loctite HI-Tack gasket Sealent (MR 5009)       | 0         | 4,18                    | 0                             | 4,18                  | 0                           |
| 290   | Loctite Repair Compound (MR 2000)              | 0         | 4,18                    | 0                             | 4,18                  | 0                           |
| 291   | Clamp Sealing Machine                          | 3         | 7,07                    | 21,21                         | 7,07                  | 21,21                       |
| 292   | Steel Band Packing Tool                        | 4         | 7,07                    | 28,28                         | 7,07                  | 28,28                       |
| 293   | Plate Banding                                  | 2         | 7,07                    | 14,14                         | 6,60                  | 13,2                        |
| 294   | Plastic Bakar                                  | 9         | 7,08                    | 63,72                         | 5,52                  | 49,68                       |
| 295   | Wrapping                                       | 65        | 7,08                    | 460,2                         | 5,74                  | 373,1                       |
| 296   | Terpal                                         | 9         | 7,08                    | 63,72                         | 6,98                  | 62,82                       |
| 297   | Rethreading Dies                               | 6         | 7,47                    | 44,82                         | 5,30                  | 31,8                        |
| 298   | Tap Size Set                                   | 4         | 7,47                    | 29,88                         | 5,30                  | 21,2                        |
| 299   | Hand Taps 3                                    | 9         | 7,47                    | 67,23                         | 7,47                  | 67,23                       |
| 300   | Tap Die Set                                    | 8         | 7,47                    | 59,76                         | 7,47                  | 59,76                       |
| 301   | Drill bit set                                  | 5         | 7,47                    | 37,35                         | 7,47                  | 37,35                       |
| 302   | Stud Remover Inch                              | 4         | 7,07                    | 28,28                         | 7,07                  | 28,28                       |
| 303   | Stud Remover mili                              | 3         | 7,07                    | 21,21                         | 7,07                  | 21,21                       |
| 304   | Battery Charging                               | 19        | 7,08                    | 134,52                        | 5,78                  | 109,82                      |
| 305   | Booster Cable Jumper                           | 7         | 7,07                    | 49,49                         | 6,37                  | 44,59                       |
| 306   | LED Head Light                                 | 8         | 7,47                    | 59,76                         | 7,47                  | 59,76                       |
| 307   | Worklamp                                       | 5         | 7,47                    | 37,35                         | 7,47                  | 37,35                       |
| 308   | Slim Light                                     | 4         | 7,47                    | 29,88                         | 7,47                  | 29,88                       |
| Total |                                                | 6716      | 1624,88                 | 30484,93                      | 1877,10               | 36305,89                    |

Lampiran 3 *Daily Check Tools*



Lampiran 4 *Inspect Lifting Tools*



Lampiran 5 Pembongkaran *Tool Store*



Lampiran 6 *Layout Tool Store Sketchup*



Lampiran 7 *Layout Tool Store Sekarang*



Lampiran 8 Lemari penyimpanan bahan *chemical*



### Lampiran 9 Surat Keterangan Bebas Plagiasi



**SURAT BEBAS PLAGIASI**

Dengan ini diterangkan bahwa TA/Skripsi yang ditulis oleh:

Nama : Albert Dewa Sultonick

NIM : 20401018

Prodi : Teknologi Rekayasa Logistik

Judul : *Relayout Gudang Menggunakan Metode Class Based Storage* di PT. Trakindo  
Utama Kantor Cabang Tanjung Redeb

Berdasarkan hasil *scanning* menunjukkan tingkat plagiasi sebesar **20%** dan memenuhi syarat untuk tahapan selanjutnya dengan ketentuan yang berlaku.

Demikian surat ini dibuat untuk dipergunakan sebagaimana mestinya.

Berau, 12 September 2024  
Staf Perpustakaan,

  
Kamella Saputri



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## BIODATA PENULIS



Penulis bernama lengkap Albert Dewa Sultonick, dilahirkan di Tulungagung, 29 Mei 2001. Penulis telah menempuh pendidikan formal di SDN 003 Tanjung Redeb, SMP 1 Berau, dan SMAN 7 Berau. Penulis meneruskan pendidikan di Program Studi Teknologi Rekayasa Logistik pada tahun 2020 dan terdaftar dengan NIM 20401018. Dalam masa perkuliahannya, penulis aktif di luar kegiatan kampus sebagai atlet cabang olahraga *E-sport* Mobile Legends Kabupaten Berau pada tahun 2022. penulis melaksanakan kegiatan KPI (Kuliah Praktik Industri) di PT Berau Coal *Site Sambarata Mine Operation* selama 3 bulan. Lalu pada tahun 2023 penulis menjalankan kegiatan Prakerin (Praktik Kerja Industri) selama 7 bulan di PT. Trakindo Utama cabang Tanjung Redeb. Pada akhir tahun perkuliahan, penulis menyusun skripsi dengan judul “*Relayout Gudang Menggunakan Metode Class Based Storage* di PT Trakindo Utama Kantor Cabang Tanjung Redeb”. Untuk keperluan penelitian, penulis dapat dihubungi melalui e-mail: [albertdewasultonick@gmail.com](mailto:albertdewasultonick@gmail.com)

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BERAU COAL**