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1. STRUCTURE

This service manual has been prepared as an aid to improve the quality of repairs by giving the serviceman an accurate understanding of the product and by showing him the correct way to perform repairs and make judgements. Make sure you understand the contents of this manual and use it to full effect at every opportunity.

This service manual mainly contains the necessary technical information for operations performed in a service workshop.

For ease of understanding, the manual is divided into the following sections.

SECTION 1 GENERAL

This section gives the general information of the machine and explains the safety hints for maintenance.

SECTION 2 REMOVAL & INSTALLATION OF UNIT

This section explains the procedures and techniques of removal and installation of each component.

SECTION 3 POWER TRAIN SYSTEM

This section explains the structure of the transmission as well as control valve and drive axle.

SECTION 4 BRAKE SYSTEM

This section explains the brake piping, each component and operation.

SECTION 5 STEERING SYSTEM

This section explains the structure of the steering unit, priority valve, trail axle as well as steering circuit and operation.

SECTION 6 HYDRAULIC SYSTEM

This section explains the structure of the gear pump, main control valve as well as work equipment circuit, each component and operation.

SECTION 7 ELECTRICAL SYSTEM

This section explains the electrical circuit and each component.

It serves not only to give an understanding electrical system, but also serves as reference material for troubleshooting.

SECTION 8 MAST

This section explains the structure of mast, carriage, backrest and forks.

The specifications contained in this service manual are subject to change at any time and without any advance notice. Contact your HYUNDAI distributor for the latest information.

2. HOW TO READ THE SERVICE MANUAL

Distribution and updating

Any additions, amendments or other changes will be sent to HYUNDAI distributors.

Get the most up-to-date information before you start any work.

Filing method

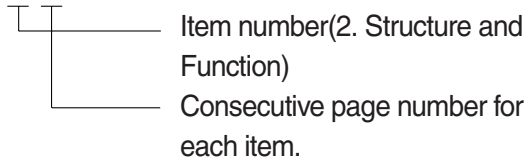
1. See the page number on the bottom of the page.

File the pages in correct order.

2. Following examples shows how to read the page number.

Example 1

2 - 3



3. Additional pages : Additional pages are indicated by a hyphen(-) and number after the page number. File as in the example.

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Revised edition mark(①②③...)

When a manual is revised, an edition mark is recorded on the bottom outside corner of the pages.

Revisions

Revised pages are shown at the **list of revised pages** on the between the contents page and section 1 page.

Symbols

So that the shop manual can be of ample practical use, important places for safety and quality are marked with the following symbols.

| Symbol | Item | Remarks |
|--------|---------|---|
| | Safety | Special safety precautions are necessary when performing the work. |
| | | Extra special safety precautions are necessary when performing the work because it is under internal pressure. |
| | Caution | Special technical precautions or other precautions for preserving standards are necessary when performing the work. |

3. CONVERSION TABLE

Method of using the Conversion Table

The Conversion Table in this section is provided to enable simple conversion of figures. For details of the method of using the Conversion Table, see the example given below.

Example

1. Method of using the Conversion Table to convert from millimeters to inches

Convert 55mm into inches.

- (1) Locate the number 50 in the vertical column at the left side, take this as (a), then draw a horizontal line from (a).
- (2) Locate the number 5 in the row across the top, take this as (b), then draw a perpendicular line down from (b).
- (3) Take the point where the two lines cross as (c). This point (c) gives the value when converting from millimeters to inches. Therefore, 55mm = 2.165 inches.

2. Convert 550mm into inches.

- (1) The number 550 does not appear in the table, so divide by 10 (Move the decimal point one place to the left) to convert it to 55mm.
- (2) Carry out the same procedure as above to convert 55mm to 2.165 inches.
- (3) The original value (550mm) was divided by 10, so multiply 2.165 inches by 10 (Move the decimal point one place to the right) to return to the original value.
This gives 550mm = 21.65 inches.

Millimeters to inches

(b)

1mm = 0.03937 in

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | | 0.039 | 0.079 | 0.118 | 0.157 | 0.197 | 0.236 | 0.276 | 0.315 | 0.354 |
| 10 | 0.394 | 0.433 | 0.472 | 0.512 | 0.551 | 0.591 | 0.630 | 0.669 | 0.709 | 0.748 |
| 20 | 0.787 | 0.827 | 0.866 | 0.906 | 0.945 | 0.984 | 1.024 | 1.063 | 1.102 | 1.142 |
| 30 | 1.181 | 1.220 | 1.260 | 1.299 | 1.339 | 1.378 | 1.417 | 1.457 | 1.496 | 1.536 |
| 40 | 1.575 | 1.614 | 1.654 | 1.693 | 1.732 | 1.772 | 1.811 | 1.850 | 1.890 | 1.929 |
| (a) 50 | 1.969 | 2.008 | 2.047 | 2.087 | 2.126 | 2.165 | 2.205 | 2.244 | 2.283 | 2.323 |
| 60 | 2.362 | 2.402 | 2.441 | 2.480 | 2.520 | 2.559 | 2.598 | 2.638 | 2.677 | 2.717 |
| 70 | 2.756 | 2.795 | 2.835 | 2.874 | 2.913 | 2.953 | 2.992 | 3.032 | 3.071 | 3.110 |
| 80 | 3.150 | 3.189 | 3.228 | 3.268 | 3.307 | 3.346 | 3.386 | 3.425 | 3.465 | 3.504 |
| 90 | 3.543 | 3.583 | 3.622 | 3.661 | 3.701 | 3.740 | 3.780 | 3.819 | 3.858 | 3.898 |

Millimeters to inches

1mm = 0.03937in

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | | 0.039 | 0.079 | 0.118 | 0.157 | 0.197 | 0.236 | 0.276 | 0.315 | 0.354 |
| 10 | 0.394 | 0.433 | 0.472 | 0.512 | 0.551 | 0.591 | 0.630 | 0.669 | 0.709 | 0.748 |
| 20 | 0.787 | 0.827 | 0.866 | 0.906 | 0.945 | 0.984 | 1.024 | 1.063 | 1.102 | 1.142 |
| 30 | 1.181 | 1.220 | 1.260 | 1.299 | 1.339 | 1.378 | 1.417 | 1.457 | 1.496 | 1.536 |
| 40 | 1.575 | 1.614 | 1.654 | 1.693 | 1.732 | 1.772 | 1.811 | 1.850 | 1.890 | 1.929 |
| 50 | 1.969 | 2.008 | 2.047 | 2.087 | 2.126 | 2.165 | 2.205 | 2.244 | 2.283 | 2.323 |
| 60 | 2.362 | 2.402 | 2.441 | 2.480 | 2.520 | 2.559 | 2.598 | 2.638 | 2.677 | 2.717 |
| 70 | 2.756 | 2.795 | 2.835 | 2.874 | 2.913 | 2.953 | 2.992 | 3.032 | 3.071 | 3.110 |
| 80 | 3.150 | 3.189 | 3.228 | 3.268 | 3.307 | 3.346 | 3.386 | 3.425 | 3.465 | 3.504 |
| 90 | 3.543 | 3.583 | 3.622 | 3.661 | 3.701 | 3.740 | 3.780 | 3.819 | 3.858 | 3.898 |

Kilogram to Pound

1kg = 2.2046lb

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0 | | 2.20 | 4.41 | 6.61 | 8.82 | 11.02 | 13.23 | 15.43 | 17.64 | 19.84 |
| 10 | 22.05 | 24.25 | 26.46 | 28.66 | 30.86 | 33.07 | 35.27 | 37.48 | 39.68 | 41.89 |
| 20 | 44.09 | 46.30 | 48.50 | 50.71 | 51.91 | 55.12 | 57.32 | 59.5 | 61.73 | 63.93 |
| 30 | 66.14 | 68.34 | 70.55 | 72.75 | 74.96 | 77.16 | 79.37 | 81.57 | 83.78 | 85.98 |
| 40 | 88.18 | 90.39 | 92.59 | 94.80 | 97.00 | 99.21 | 101.41 | 103.62 | 105.82 | 108.03 |
| 50 | 110.23 | 112.44 | 114.64 | 116.85 | 119.05 | 121.25 | 123.46 | 125.66 | 127.87 | 130.07 |
| 60 | 132.28 | 134.48 | 136.69 | 138.89 | 141.10 | 143.30 | 145.51 | 147.71 | 149.91 | 152.12 |
| 70 | 154.32 | 156.53 | 158.73 | 160.94 | 163.14 | 165.35 | 167.55 | 169.76 | 171.96 | 174.17 |
| 80 | 176.37 | 178.57 | 180.78 | 182.98 | 185.19 | 187.39 | 189.60 | 191.80 | 194.01 | 196.21 |
| 90 | 198.42 | 200.62 | 202.83 | 205.03 | 207.24 | 209.44 | 211.64 | 213.85 | 216.05 | 218.26 |

Liter to U.S. Gallon

1 l = 0.2642 U.S.Gal

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0 | | 0.264 | 0.528 | 0.793 | 1.057 | 1.321 | 1.585 | 1.849 | 2.113 | 2.378 |
| 10 | 2.642 | 2.906 | 3.170 | 3.434 | 3.698 | 3.963 | 4.227 | 4.491 | 4.755 | 5.019 |
| 20 | 5.283 | 5.548 | 5.812 | 6.076 | 6.340 | 6.604 | 6.869 | 7.133 | 7.397 | 7.661 |
| 30 | 7.925 | 8.189 | 8.454 | 8.718 | 8.982 | 9.246 | 9.510 | 9.774 | 10.039 | 10.303 |
| 40 | 10.567 | 10.831 | 11.095 | 11.359 | 11.624 | 11.888 | 12.152 | 12.416 | 12.680 | 12.944 |
| 50 | 13.209 | 13.473 | 13.737 | 14.001 | 14.265 | 14.529 | 14.795 | 15.058 | 15.322 | 15.586 |
| 60 | 15.850 | 16.115 | 16.379 | 16.643 | 16.907 | 17.171 | 17.435 | 17.700 | 17.964 | 18.228 |
| 70 | 18.492 | 18.756 | 19.020 | 19.285 | 19.549 | 19.813 | 20.077 | 20.341 | 20.605 | 20.870 |
| 80 | 21.134 | 21.398 | 21.662 | 21.926 | 22.190 | 22.455 | 22.719 | 22.983 | 23.247 | 23.511 |
| 90 | 23.775 | 24.040 | 24.304 | 24.568 | 24.832 | 25.096 | 25.361 | 25.625 | 25.889 | 26.153 |

Liter to U.K. Gallon

1 l = 0.21997 U.K.Gal

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0 | | 0.220 | 0.440 | 0.660 | 0.880 | 1.100 | 1.320 | 1.540 | 1.760 | 1.980 |
| 10 | 2.200 | 2.420 | 2.640 | 2.860 | 3.080 | 3.300 | 3.520 | 3.740 | 3.950 | 4.179 |
| 20 | 4.399 | 4.619 | 4.839 | 5.059 | 5.279 | 5.499 | 5.719 | 5.939 | 6.159 | 6.379 |
| 30 | 6.599 | 6.819 | 7.039 | 7.259 | 7.479 | 7.699 | 7.919 | 8.139 | 8.359 | 8.579 |
| 40 | 8.799 | 9.019 | 9.239 | 9.459 | 9.679 | 9.899 | 10.119 | 10.339 | 10.559 | 10.778 |
| 50 | 10.998 | 11.281 | 11.438 | 11.658 | 11.878 | 12.098 | 12.318 | 12.528 | 12.758 | 12.978 |
| 60 | 13.198 | 13.418 | 13.638 | 13.858 | 14.078 | 14.298 | 14.518 | 14.738 | 14.958 | 15.178 |
| 70 | 15.398 | 15.618 | 15.838 | 16.058 | 16.278 | 16.498 | 16.718 | 16.938 | 17.158 | 17.378 |
| 80 | 17.598 | 17.818 | 18.037 | 18.257 | 18.477 | 18.697 | 18.917 | 19.137 | 19.357 | 19.577 |
| 90 | 19.797 | 20.017 | 20.237 | 20.457 | 20.677 | 20.897 | 21.117 | 21.337 | 21.557 | 21.777 |

kgf · m to lbf · ft

1 kgf · m = 7.233lbf · ft

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | | 7.2 | 14.5 | 21.7 | 28.9 | 36.2 | 43.4 | 50.6 | 57.9 | 65.1 |
| 10 | 72.3 | 79.6 | 86.8 | 94.0 | 101.3 | 108.5 | 115.7 | 123.0 | 130.2 | 137.4 |
| 20 | 144.7 | 151.9 | 159.1 | 166.4 | 173.6 | 180.8 | 188.1 | 195.3 | 202.5 | 209.8 |
| 30 | 217.0 | 224.2 | 231.5 | 238.7 | 245.9 | 253.2 | 260.4 | 267.6 | 274.9 | 282.1 |
| 40 | 289.3 | 296.6 | 303.8 | 311.0 | 318.3 | 325.5 | 332.7 | 340.0 | 347.2 | 354.4 |
| 50 | 361.7 | 368.9 | 376.1 | 383.4 | 390.6 | 397.8 | 405.1 | 412.3 | 419.5 | 426.8 |
| 60 | 434.0 | 441.2 | 448.5 | 455.7 | 462.9 | 470.2 | 477.4 | 484.6 | 491.8 | 499.1 |
| 70 | 506.3 | 513.5 | 520.8 | 528.0 | 535.2 | 542.5 | 549.7 | 556.9 | 564.2 | 571.4 |
| 80 | 578.6 | 585.9 | 593.1 | 600.3 | 607.6 | 614.8 | 622.0 | 629.3 | 636.5 | 643.7 |
| 90 | 651.0 | 658.2 | 665.4 | 672.7 | 679.9 | 687.1 | 694.4 | 701.6 | 708.8 | 716.1 |
| 100 | 723.3 | 730.5 | 737.8 | 745.0 | 752.2 | 759.5 | 766.7 | 773.9 | 781.2 | 788.4 |
| 110 | 795.6 | 802.9 | 810.1 | 817.3 | 824.6 | 831.8 | 839.0 | 846.3 | 853.5 | 860.7 |
| 120 | 868.0 | 875.2 | 882.4 | 889.7 | 896.9 | 904.1 | 911.4 | 918.6 | 925.8 | 933.1 |
| 130 | 940.3 | 947.5 | 954.8 | 962.0 | 969.2 | 976.5 | 983.7 | 990.9 | 998.2 | 10005.4 |
| 140 | 1012.6 | 1019.9 | 1027.1 | 1034.3 | 1041.5 | 1048.8 | 1056.0 | 1063.2 | 1070.5 | 1077.7 |
| 150 | 1084.9 | 1092.2 | 1099.4 | 1106.6 | 1113.9 | 1121.1 | 1128.3 | 1135.6 | 1142.8 | 1150.0 |
| 160 | 1157.3 | 1164.5 | 1171.7 | 1179.0 | 1186.2 | 1193.4 | 1200.7 | 1207.9 | 1215.1 | 1222.4 |
| 170 | 1129.6 | 1236.8 | 1244.1 | 1251.3 | 1258.5 | 1265.8 | 1273.0 | 1280.1 | 1287.5 | 1294.7 |
| 180 | 1301.9 | 1309.2 | 1316.4 | 1323.6 | 1330.9 | 1338.1 | 1345.3 | 1352.6 | 1359.8 | 1367.0 |
| 190 | 1374.3 | 1381.5 | 1388.7 | 1396.0 | 1403.2 | 1410.4 | 1417.7 | 1424.9 | 1432.1 | 1439.4 |

kgf/cm² to lbf/in²

1 kgf / cm² = 14.2233 lbf / in²

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 14.2 | 28.4 | 42.7 | 56.9 | 71.1 | 85.3 | 99.6 | 113.8 | 128.0 |
| 10 | 142.2 | 156.5 | 170.7 | 184.9 | 199.1 | 213.4 | 227.6 | 241.8 | 256.0 | 270.2 |
| 20 | 284.5 | 298.7 | 312.9 | 327.1 | 341.4 | 355.6 | 369.8 | 384.0 | 398.3 | 412.5 |
| 30 | 426.7 | 440.9 | 455.1 | 469.4 | 483.6 | 497.8 | 512.0 | 526.3 | 540.5 | 554.7 |
| 40 | 568.9 | 583.2 | 597.4 | 611.6 | 625.8 | 640.1 | 654.3 | 668.5 | 682.7 | 696.9 |
| 50 | 711.2 | 725.4 | 739.6 | 753.8 | 768.1 | 782.3 | 796.5 | 810.7 | 825.0 | 839.2 |
| 60 | 853.4 | 867.6 | 881.8 | 896.1 | 910.3 | 924.5 | 938.7 | 953.0 | 967.2 | 981.4 |
| 70 | 995.6 | 1010 | 1024 | 1038 | 1053 | 1067 | 1081 | 1095 | 1109 | 1124 |
| 80 | 1138 | 1152 | 1166 | 1181 | 1195 | 1209 | 1223 | 1237 | 1252 | 1266 |
| 90 | 1280 | 1294 | 1309 | 1323 | 1337 | 1351 | 1365 | 1380 | 1394 | 1408 |
| 100 | 1422 | 1437 | 1451 | 1465 | 1479 | 1493 | 1508 | 1522 | 1536 | 1550 |
| 110 | 1565 | 1579 | 1593 | 1607 | 1621 | 1636 | 1650 | 1664 | 1678 | 1693 |
| 120 | 1707 | 1721 | 1735 | 1749 | 1764 | 1778 | 1792 | 1806 | 1821 | 1835 |
| 130 | 1849 | 2863 | 1877 | 1892 | 1906 | 1920 | 1934 | 1949 | 1963 | 1977 |
| 140 | 1991 | 2005 | 2020 | 2034 | 2048 | 2062 | 2077 | 2091 | 2105 | 2119 |
| 150 | 2134 | 2148 | 2162 | 2176 | 2190 | 2205 | 2219 | 2233 | 2247 | 2262 |
| 160 | 2276 | 2290 | 2304 | 2318 | 2333 | 2347 | 2361 | 2375 | 2389 | 2404 |
| 170 | 2418 | 2432 | 2446 | 2460 | 2475 | 2489 | 2503 | 2518 | 2532 | 2546 |
| 180 | 2560 | 2574 | 2589 | 5603 | 2617 | 2631 | 2646 | 2660 | 2674 | 2688 |
| 200 | 2845 | 2859 | 2873 | 2887 | 2901 | 2916 | 2930 | 2944 | 2958 | 2973 |
| 210 | 2987 | 3001 | 3015 | 3030 | 3044 | 3058 | 3072 | 3086 | 3101 | 3115 |
| 220 | 3129 | 3143 | 3158 | 3172 | 3186 | 3200 | 3214 | 3229 | 3243 | 3257 |
| 230 | 3271 | 3286 | 3300 | 3314 | 3328 | 3343 | 3357 | 3371 | 3385 | 3399 |
| 240 | 3414 | 3428 | 3442 | 3456 | 3470 | 3485 | 3499 | 3513 | 3527 | 3542 |

TEMPERATURE

Fahrenheit-Centigrade Conversion.

A simple way to convert a fahrenheit temperature reading into a centigrade temperature reading or vice versa is to enter the accompanying table in the center or boldface column of figures.

These figures refer to the temperature in either Fahrenheit or Centigrade degrees.

If it is desired to convert from Fahrenheit to Centigrade degrees, consider the center column as a table of Fahrenheit temperatures and read the corresponding Centigrade temperature in the column at the left.

If it is desired to convert from Centigrade to Fahrenheit degrees, consider the center column as a table of Centigrade values, and read the corresponding Fahrenheit temperature on the right.

| °C | | °F | °C | | °F | °C | | °F | °C | | °F |
|-------|-----|-------|-------|----|-------|------|----|-------|------|-----|-------|
| -40.4 | -40 | -40.0 | -11.7 | 11 | 51.8 | 7.8 | 46 | 114.8 | 27.2 | 81 | 117.8 |
| -37.2 | -35 | -31.0 | -11.1 | 12 | 53.6 | 8.3 | 47 | 116.6 | 27.8 | 82 | 179.6 |
| -34.4 | -30 | -22.0 | -10.6 | 13 | 55.4 | 8.9 | 48 | 118.4 | 28.3 | 83 | 181.4 |
| -31.7 | -25 | -13.0 | -10.0 | 14 | 57.2 | 9.4 | 49 | 120.2 | 28.9 | 84 | 183.2 |
| -28.9 | -20 | -4.0 | -9.4 | 15 | 59.0 | 10.0 | 50 | 122.0 | 29.4 | 85 | 185.0 |
| -28.3 | -19 | -2.2 | -8.9 | 16 | 60.8 | 10.6 | 51 | 123.8 | 30.0 | 86 | 186.8 |
| -27.8 | -18 | -0.4 | -8.3 | 17 | 62.6 | 11.1 | 52 | 125.6 | 30.6 | 87 | 188.6 |
| -27.2 | -17 | 1.4 | -7.8 | 18 | 64.4 | 11.7 | 53 | 127.4 | 31.1 | 88 | 190.4 |
| -26.7 | -16 | 3.2 | -6.7 | 20 | 68.0 | 12.8 | 55 | 131.0 | 32.2 | 90 | 194.0 |
| -26.1 | -15 | 5.0 | -6.7 | 20 | 68.0 | 12.8 | 55 | 131.0 | 32.2 | 90 | 194.0 |
| -25.6 | -14 | 6.8 | -6.1 | 21 | 69.8 | 13.3 | 56 | 132.8 | 32.8 | 91 | 195.8 |
| -25.0 | -13 | 8.6 | -5.6 | 22 | 71.6 | 13.9 | 57 | 134.6 | 33.3 | 92 | 197.6 |
| -24.4 | -12 | 10.4 | -5.0 | 23 | 73.4 | 14.4 | 58 | 136.4 | 33.9 | 93 | 199.4 |
| -23.9 | -11 | 12.2 | -4.4 | 24 | 75.2 | 15.0 | 59 | 138.2 | 34.4 | 94 | 201.2 |
| -23.3 | -10 | 14.0 | -3.9 | 25 | 77.0 | 15.6 | 60 | 140.0 | 35.0 | 95 | 203.0 |
| -22.8 | -9 | 15.8 | -3.3 | 26 | 78.8 | 16.1 | 61 | 141.8 | 35.6 | 96 | 204.8 |
| -22.2 | -8 | 17.6 | -2.8 | 27 | 80.6 | 16.7 | 62 | 143.6 | 36.1 | 97 | 206.6 |
| -21.7 | -7 | 19.4 | -2.2 | 28 | 82.4 | 17.2 | 63 | 145.4 | 36.7 | 98 | 208.4 |
| -21.1 | -6 | 21.2 | -1.7 | 29 | 84.2 | 17.8 | 64 | 147.2 | 37.2 | 99 | 210.2 |
| -20.6 | -5 | 23.0 | -1.1 | 35 | 95.0 | 21.1 | 70 | 158.0 | 51.7 | 125 | 257.0 |
| -20.0 | -4 | 24.8 | -0.6 | 31 | 87.8 | 18.9 | 66 | 150.8 | 40.6 | 105 | 221.0 |
| -19.4 | -3 | 26.6 | 0 | 32 | 89.6 | 19.4 | 67 | 152.6 | 43.3 | 110 | 230.0 |
| -18.9 | -2 | 28.4 | 0.6 | 33 | 91.4 | 20.0 | 68 | 154.4 | 46.1 | 115 | 239.0 |
| -18.3 | -1 | 30.2 | 1.1 | 34 | 93.2 | 20.6 | 69 | 156.2 | 48.9 | 120 | 248.0 |
| -17.8 | 0 | 32.0 | 1.7 | 35 | 95.0 | 21.1 | 70 | 158.0 | 51.7 | 125 | 257.0 |
| -17.2 | 1 | 33.8 | 2.2 | 36 | 96.8 | 21.7 | 71 | 159.8 | 54.4 | 130 | 266.0 |
| -16.7 | 2 | 35.6 | 2.8 | 37 | 98.6 | 22.2 | 72 | 161.6 | 57.2 | 135 | 275.0 |
| -16.1 | 3 | 37.4 | 3.3 | 38 | 100.4 | 22.8 | 73 | 163.4 | 60.0 | 140 | 284.0 |
| -15.6 | 4 | 39.2 | 3.9 | 39 | 102.2 | 23.3 | 74 | 165.2 | 62.7 | 145 | 293.0 |
| -15.0 | 5 | 41.0 | 4.4 | 40 | 104.0 | 23.9 | 75 | 167.0 | 65.6 | 150 | 302.0 |
| -14.4 | 6 | 42.8 | 5.0 | 41 | 105.8 | 24.4 | 76 | 168.8 | 68.3 | 155 | 311.0 |
| -13.9 | 7 | 44.6 | 5.6 | 42 | 107.6 | 25.0 | 77 | 170.6 | 71.1 | 160 | 320.0 |
| -13.3 | 8 | 46.4 | 6.1 | 43 | 109.4 | 25.6 | 78 | 172.4 | 73.9 | 165 | 329.0 |
| -12.8 | 9 | 48.2 | 6.7 | 44 | 111.2 | 26.1 | 79 | 174.2 | 76.7 | 170 | 338.0 |
| -12.2 | 10 | 50.0 | 7.2 | 45 | 113.0 | 26.7 | 80 | 176.0 | 79.4 | 172 | 347.0 |

GROUP 1 SAFETY HINTS

Careless performing of the easy work may cause injuries.

Take care to always perform work safely, at least observing the following.

- Oil is a dangerous substance. Never handle oil, grease or oily clothes in places where there is any fire or flame.

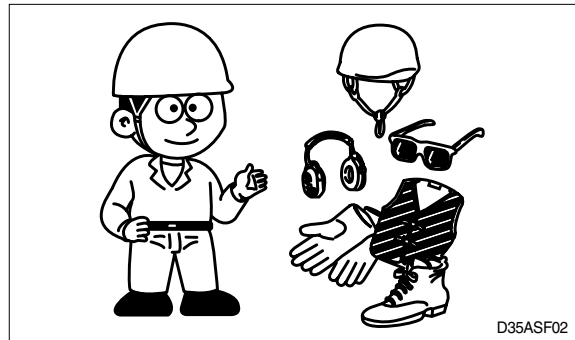
As preparation in case of fire, always know the location and directions for use of fire extinguishers and other fire fighting equipment.



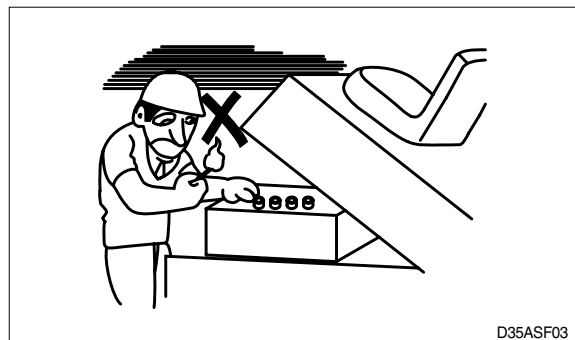
- Wear well-fitting helmet, safety shoes and working clothes. When drilling, grinding or hammering, always wear protective goggles.

Always do up safety clothes properly so that they do not catch on protruding parts of machines. Do not wear oily clothes.

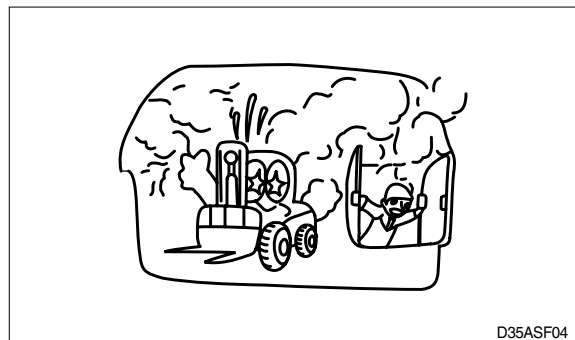
When checking, always release battery plug.



- Flames should never be used instead of lamps. Never use a naked flame to check leaks or the level of oil or electrolyte.

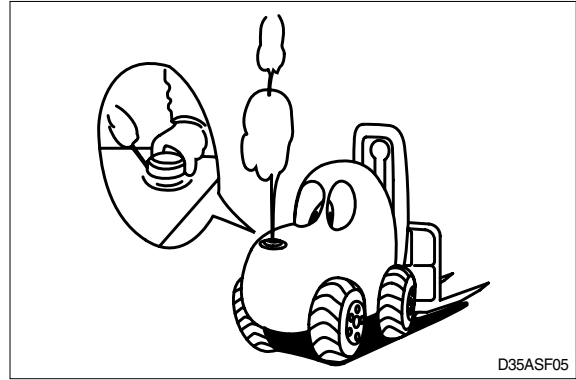


- Exhaust gas is dangerous. Provide adequate ventilation when working a closed space.



▲ Be particularly careful when removing the radiator cap and the hydraulic oil tank filler cap, if this is done immediately after using the machine, there is a danger that boiled oil may spurt out.

- The procedure for releasing the hydraulic pressure is as follows : lower the fork to the ground, and stop the engine(Motor), move the control levers to each position two or three times.



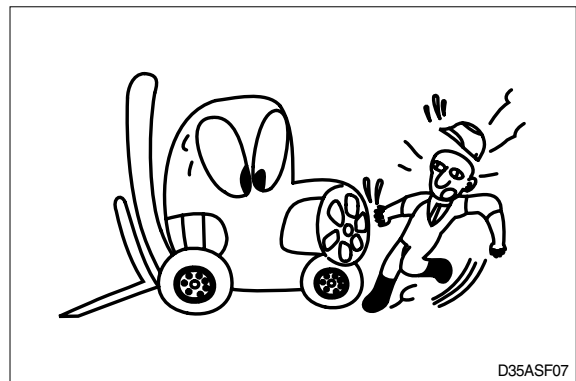
- When working on top of the machine, be careful not to lose your balance and fall.



- Hand a caution sign in the operator's compartment (For example **Do not start** or **Maintenance in progress**).

This will prevent anyone from starting or moving the machine by mistake.

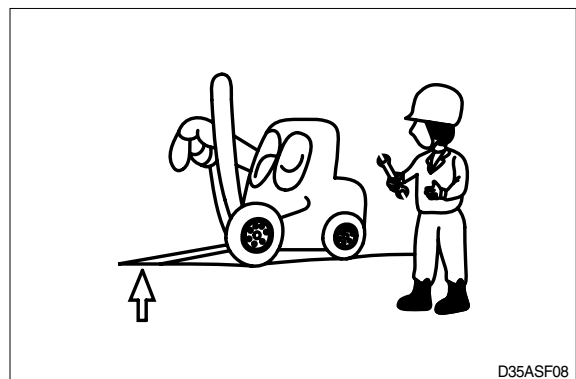
▲ It is extremely dangerous to try to check the fan belt tension while the engine is running.



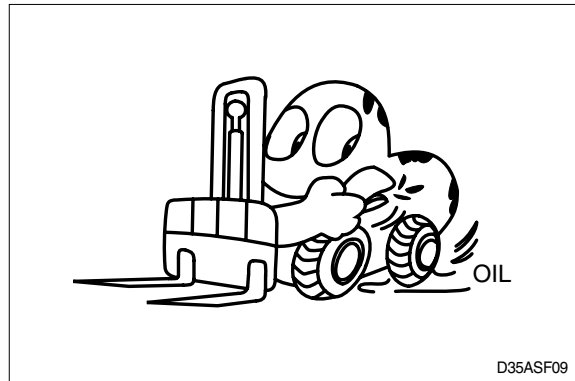
When inspecting the engine is running parts, or near such parts, always stop the engine first.

Before checking or servicing accumulator or piping, depress brake pedal repeatedly to release pressure.

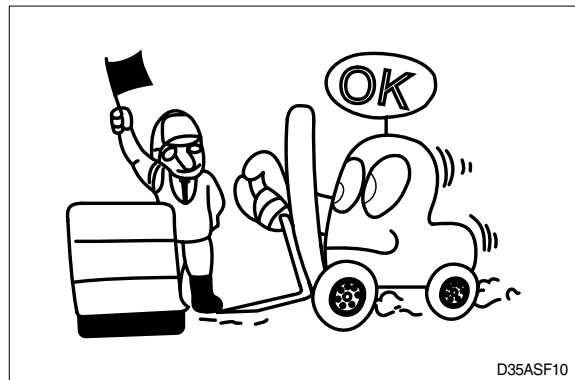
- Park the machine on firm, flat ground.
Lower the fork to the ground and stop the engine.
Return each lever to **NEUTRAL** and apply the brake lock.



- Immediately remove any oil or grease on the floor of the operator's compartment, or on the handrail. It is very dangerous if someone slips while on the machine.



- When working with others, choose a group leader and work according to his instructions. Do not perform any maintenance beyond the agreed work.



- Unless you have special instructions to the contrary, maintenance should always be carried out with the engine stopped. If maintenance is carried out with the engine running, there must be two men present : one sitting in the operator's seat and the other one performing the maintenance. In such a case, never touch any moving part.

- Always remember that the hydraulic oil circuit is under pressure. When feeding or draining the oil or carrying out inspection and maintenance, release the pressure first.



- Thoroughly clean the machine. In particular, be careful to clean the filler caps, grease fittings and the area around the dipsticks. Be careful not to let any dirt or dust into the system.
- Always use HYUNDAI Forklift genuine parts for replacement.
- Always use the grades of grease and oil recommended by HYUNDAI Forklift.
Choose the viscosity oil specified for the ambient temperature.
- Always use pure oil or grease, and be sure to use clean containers.
- When checking or changing the oil, do it in a place free of dust, and prevent any dirt from getting into the oil.
- Before draining the oil, warm it up to a temperature of 30 to 40° C .
- After replacing oil, filter element or strainer, bleed the air from circuit.
- When the strainer is located in the oil filler, the strainer must not be removed while adding oil.
- When changing the oil filter, check the drained oil and filter for any signs of excessive metal particles or other foreign materials.
- When removing parts containing O-ring, gaskets or seals, clean the mounting surface and replace with new sealing parts.
- After injecting grease, always wipe off the oil grease that was forced out.
- Do not handle electrical equipment while wearing wet places, as this can cause electric shock.
- During maintenance, do not allow any unauthorized person to stand near the machine.
- Be sure you fully understand the contents of the operation. It is important to prepare necessary tools and parts and to keep the operating area clean.
- When checking an open gear case, there is a risk of dropping things in. Before removing the covers to inspect such cases, empty everything from your pockets. Be particularly careful to remove wrenches and nuts.
- Way to use dipstick
Push the dipstick fully into the guide, and then pull out.

Carrying out other difficult maintenance work carelessly can cause unexpected accidents. If you consider the maintenance is too difficult, always request the HYUNDAI Forklift distributor to carry out it.

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