



# *Specifications*

**Hino Motors, Ltd.**  
TOKYO, JAPAN

## SPECIFICATIONS

Spec. No. SS-SH310  
Drawing No. CDRSH314



# HINO 700 Series

4x2, Tractor Chassis

- RHD
- 450 PS (Euro-4)
- 45.5 ton GCMR
- Rear air suspension

### RATINGS & AXLE LOAD LIMIT (kg)

|                 | GVM    | GCM  | Front Axle | Rear Axle |
|-----------------|--------|--|------------|-----------|
| Ratings         | 19,000 | 45,500   | 7,500      | 11,500    |
| Axle Load Limit | (STD)  | Front&Rear: 295/80R22.5-153/150                          | 7,300      | 11,500    |
|                 | (OPT)  | Front: 315/80R22.5-156/153<br>Rear : 295/80R22.5-153/150 | 7,500      |           |

### CHASSIS DIMENSIONS (mm) : All dimensions are to standard specifications and unladen chassis

|                                | <b>HINO 71945</b> |
|--------------------------------|-------------------|
| Model                          | SH1EGKG           |
| Production Code                | For tractor       |
| Application                    | 3,830             |
| Wheelbase                      | 6,225             |
| Overall length                 | 2,490             |
| Overall width                  | 2,980             |
| Overall height                 | 250               |
| Road clearance (at diff. case) | 2,050             |
| Front Tread                    | 1,840             |
| Rear Tread                     | 6,300             |
| Turning radius on tire         | 7,100             |
| Turning radius on wall to wall |                   |

### CHASSIS MASS (kg) : Chassis mass quoted is to standard specifications without spare tire & std. tool set

|              |         |       |
|--------------|---------|-------|
| Chassis Mass | (Total) | 6,895 |
|              | (Front) | 4,760 |
|              | (Rear)  | 2,135 |

### PERFORMANCE & GEAR RATIOS : Calculations based on 45.5 ton GCM, 295/80R22.5 tire

|                         | Below 90 (controlled by speed limiter) |                 |
|-------------------------|--|-----------------|
| Max. Speed (km/h)       | 52.1                                   |                 |
| Gradeability tanθ (%)   | ZF 16S221                              |                 |
| Transmission Gear Ratio | Model                                  | 13.804 / 11.539 |
|                         | 1st                                    | 9.487 / 7.930   |
|                         | 2nd                                    | 6.529 / 5.458   |
|                         | 3rd                                    | 4.565 / 3.816   |
|                         | 4th                                    | 3.023 / 2.527   |
|                         | 5th (Low/High)                         | 2.078 / 1.737   |
|                         | 6th                                    | 1.430 / 1.195   |
|                         | 7th                                    | 1.000 / 0.835   |
|                         | 8th                                    | 12.923 / 10.803 |
| Rear Axle               | Model                                  | SH19-1          |
|                         | Gear Ratio                             | 3.727           |

|                                   |   |   |   |
|-----------------------------------|---|---|---|
| <b>ENGINE</b>                     |   | 2.Wheel brake ass'y                         |   |
| 1.Model                           | HINO E13C UR  | Drum diameter x Lining width                |   |
| 2.Max. output;(JIS GROSS)         | 331 kW {450 PS} at 1,800 r/min  | Front                                       | 406.4 x 152 mm  |
| 3.Max. torque;(JIS GROSS)         | 1,912 N·m {195 kgf·m} at 1,100 r/min  | Rear  | 406.4 x 203 mm  |
| 4.Max. engine speed               | 1,800 r/min   | 3.Air drier                                 | Equipped  |
| 5.Type                            | Diesel, turbo charged intercooled, 4-cy., vertical, 6-cyl., in-line, overhead camshaft, water cooled          | 4.ABS system                                | Equipped  |
| 6.Combustion system               | Direct injection type   | 5.Auto brake shoes adjuster                 | Equipped  |
| 7.Bore and stroke                 | 137 x 146 mm  | 6.Load sensing valve                        | Equipped  |
| 8.Piston displacement             | 12.913 L  | <b>SECONDARY AND PARKING BRAKE</b>          |   |
| 9.Compression ratio               | 17.0  | 1.Type                                      | Spring brake acting on rear wheels, for emergency and parking purpose, manual control   |
| 10.Engine oil capacity            | 37.0 L  | <b>STEERING</b>                             |   |
| 11.Engine coolant capacity        | 28.5 L  | 1.Type                                      | Telescopic and tilt steering column with locking device<br>Recirculating ball with hydraulic booster integral type                        |
| 12.Fuel injection pump Type       | Electronic control common rail type   | 2.Gear ratio                                | 21.4 - 23.8   |
| Governor                          | Electric governor   | <b>RETARDER</b>                             |   |
| 13.Intake system Air cleaner      | Dual paper elements   | 1.Type                                      | Hino engine retarder  |
| 14.Air compressor Type            | Single cylinder, water-cooled   | <b>FRONT SUSPENSION</b>                     |   |
| Bore and stroke                   | 95 x 70 mm  | 1.Type                                      | Semi-elliptic tapered leaf springs with shock absorbers and stabilizer  |
| 15.Engine control link            | Equipped  | 2.Dimensions of springs                     |   |
| 16.Insect protection              | Equipped  | Span  | 1,500 mm  |
| <b>CLUTCH</b>                     |   | Width                                       | 90 mm   |
| 1.Type                            | Dry single plate with damper springs  | <b>REAR SUSPENSION</b>                      |   |
| 2.Clutch disc ass'y               | CS-430 series   | 1.Type                                      | Air bag suspension with shock absorbers   |
| 3.Facing material                 | Semi-mold   | 2. Height control                           | Mechanical type   |
| 4.Facing outside diameter         | 430 mm  | <b>WHEEL AND TIRE</b>                       |   |
| 5.Clutch cover ass'y              | DSP-430 series  | 1.Wheel type                                | 10-stud disc wheels (ISO type)  |
| 6.Control                         | Hydraulic with air booster  | 2.Rim size                                  | 22.5 x 8.25 - offset 165 mm   |
| <b>TRANSMISSION</b>               |   | 3.Tire size                                 | 295/80R22.5-153/150   |
| 1.Type                            | ZF, sixteen forward and two reverse speeds, overdrive, synchromesh 1st - 16th                                 | 4.Number of tires                           | Six (6) numbers   |
| 2.Control                         | Mechanical control with power shift   | <b>FUEL TANK</b>                            |   |
| <b>PROPELLER SHAFT</b>            |   | 1.Capacity                                  | 400 L + 200 L   |
| 1.Propeller shaft ass'y T/M ~ R/A | Tube type   | 2.Fuel pre-filter and sedimenter            | Equipped  |
| 2.Universal joints                | Round bearing type  | 3.Fuel tank cap key                         | Equipped  |
| 3.Center bearing                  | 1-piece   | <b>CHASSIS FRAME</b>                        |   |
| <b>FRONT AXLE</b>                 |   | 1.Type                                      | Ladder-shaped channel section side rails  |
| 1.Front axle ass'y                | MF78I series  | 2.Rear chassis width                        | 850 mm  |
| 2.Type                            | Reversed Elliot, "I" section beam   | 3.Max. section (depth x flange x thickness) | 302 x 88 x 9.0 mm   |
| <b>REAR AXLE</b>                  |   | 4.Tensile strength                          | 540 N/mm <sup>2</sup> {55 kgf/m <sup>2</sup> }  |
| 1.Type                            | Full-floating, single reduction, single-speed by hypoid gearings with inter axle differential lock, "No SPIN" | 5. Hook                                     | Equipped for front  |
| <b>SERVICE BRAKE</b>              |   | <b>CAB</b>                                  |   |
| 1.Type                            | Full air, dual circuit, taper roller type, leading & trailing shoes for front and rear                        | 1. Type                                     | Forward control, all steel welded construction, full floating cab (front:air, rear:air)<br><br>with electrical oil-pump tilting mechanism |

|   |   |
|---|---|
| <p>2. Seating capacity Two</p> <p>3. Driver's seat Not equipped (Fitting parts only)</p> <p>4. Side passenger's seat Urethane foam pads, high-back and reclining seat with fabric cover and under tray</p> <p>5. Center console Equipped</p> <p>6. Seat belts 3-point type on driver's &amp; side passenger's seat</p> <p>7. Rear view mirrors Not equipped</p> <p>8. Windshield wipers Electric, triple, intermittent and 2-speed</p> <p>9. Sun visor and over-head console Two, for driver and side passenger</p> <p>10 Center over-head console Equipped</p> <p>11 Cigarette lighter Equipped</p> <p>12 Ventilator Forced type by electric blower</p> <p>13 Car heater and defroster Equipped</p> <p>14 Sleeping bed Equipped</p> <p>15 Sleeping bed curtain Equipped</p> <p>16 Car audio AM/FM radio with cassette tape and CD player</p> <p>17 Floor mat Vinyl type</p> <p>18 Front air spoiler Equipped</p> <p>19 Cab step Equipped</p> <p>20 Trim Full trim type (side, roof and back)</p> <p>21 Electrical power window Equipped with both side</p> <p>22 Electrical door lock Equipped</p> <p>23 Door pockets Equipped at both door side</p> <p>24 Tire inflator Equipped</p> <p>25 Power window Driver and assistant</p> <p>26 Ashtray Driver and assistant</p> | <p>Transmission splitter range indicator lamp</p> <p>3.Switches<br/>Lighting switch<br/>Directional indicator, dimmer and passing switch<br/>Wiper and washer switch<br/>Hazard lamp switch<br/>Fog lamp switch<br/>Doom lamp switch<br/>Warning lamp check switch<br/>Map lamp switch<br/>Height control switch</p> <p>4.Others<br/>One-key starting-stopping<br/>Throttle control knob<br/>Horn button</p>  |
| <p><b>INSTRUMENTS</b></p> <p>1.Meter and gauges km-kg system<br/>Speedometer with trip meter<br/>Odometer<br/>Tachometer<br/>Fuel gauge<br/>Coolant temperature gauge<br/>Air pressure gauge</p> <p>2.Warning, pilot lamps and buzzers<br/>Engine oil pressure warning lamp and buzzer<br/>Air pressure warning lamp and buzzer<br/>Buck-up warning buzzer<br/>Charging warning lamp<br/>Beam indicator lamp<br/>Turn signal indicator lamp<br/>Parking brake indicator lamp<br/>Coolant level warning lamp and buzzer<br/>Engine over-run warning buzzer<br/>Fuel level warning lamp<br/>Battery charging pilot lamp<br/>ABS warning lamp<br/>Engine retarder indicator lamp<br/>Trailer brake pilot lamp<br/>Sedimenter water level warning lamp</p>  | <p><b>ELECTRICAL EQUIPMENT</b></p> <p>1.Type 24 volt, negative earth</p> <p>2.Batteries<br/>Number per vehicle 12 V x 2, series-connection<br/>Capacity 432 kC {120 A·h} at 20-hour rate</p> <p>3.Alternator<br/>Type With built-in rectifier and voltage regulator<br/>Capacity 24 V, 90 A</p> <p>4.Starter<br/>Type Pinion shift<br/>Capacity 24 V, 6.0 kW</p> <p>5.Lamps<br/>Headlamps<br/>Fog lamps<br/>License plate lamp<br/>Stop/Tail lamps<br/>Back-up lamp<br/>Directional indicator and hazard lamps(front, side and rear)<br/>Reading lamp (Fluorescent lamp)<br/>Map lamp<br/>Front end outline marker lamps<br/>Rear end outline maker lamps<br/>Work lamp<br/>Side marker lamp<br/>Step lamp (for driver)</p> <p>6.Horn Electric horn</p> <p><b>TRAILER EQUIPMENTS</b></p> <p>1.Semitrailer brake<br/>Control valve Hand control on steering column<br/>Brake connection 2-line, service &amp; emergency<br/>Brake connection type SAE glad-hand</p> <p><b>OPTIONAL EQUIPMENTS</b></p> <p>1. Intake air heater Electric heating type</p> <p>2. Rim size<br/>Front : 22.5x9.00-175 mm<br/>Rear : 22.5x8.25-165 mm</p> <p>3. Tire size<br/>Front :<br/>315/80R22.5-156/153<br/>Rear : 295/80R22.5-153/150</p> <p>4. Spare tire Equipped</p> <p>5. Spare tire carrier Equipped</p> |

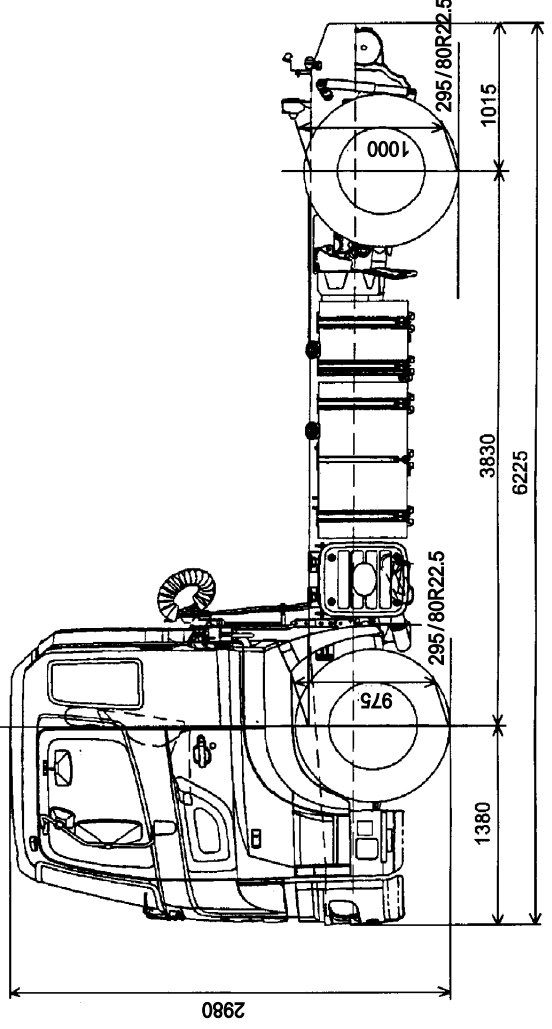
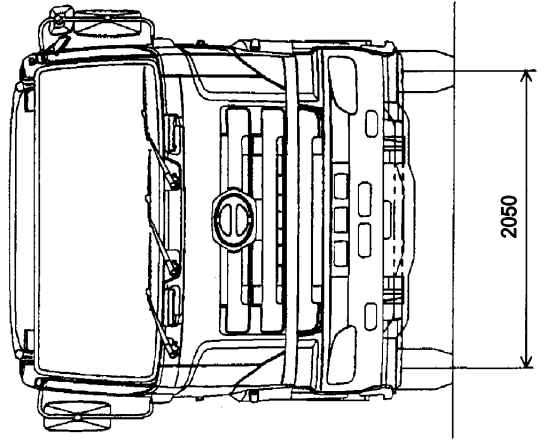
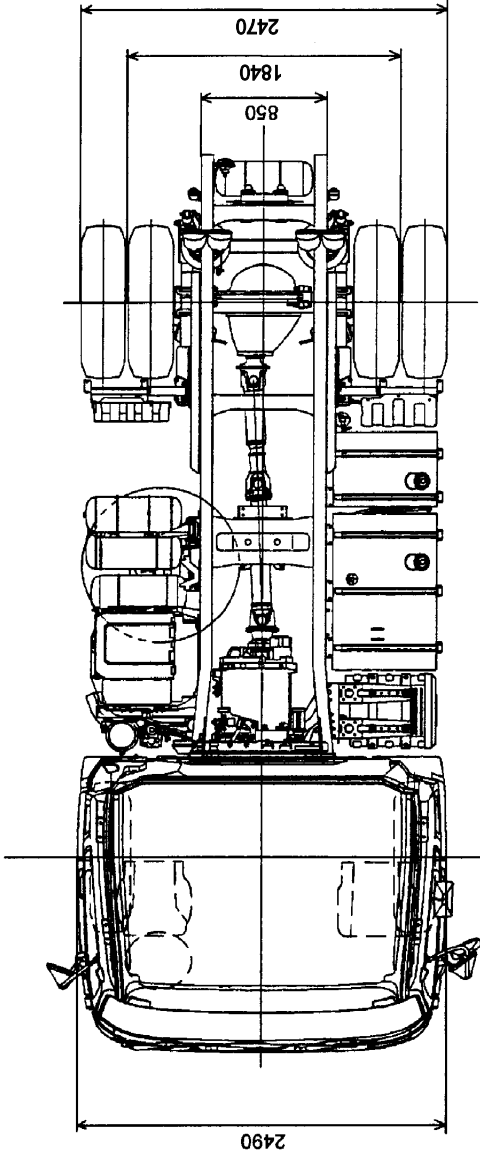
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|--|--------------------------------------|---------------------|---------------------------|
| 6. Seating capacity                          | One                                  | 15. Reading lamp    | Equipped with fluorescent |
| 7. Air conditioner                           | Equipped                             | 16. Car audio       | AM/FM radio with cassette |
| 8. Floor mat                                 | Carpet type                          |                     | tape                      |
| 9. Transmission P.T.O.<br>and P.T.O. control | Equipped                             |                     | AM/FM radio               |
| 10 Battery capacity                          | 540 kC {150 A·h} at 20-<br>hour rate | 17. Cab pocket      | Door pocket only          |
| 11 F.S.cruise                                | Equipped                             | 18. Tire inflator   | Equipped                  |
| 12 Engine start device                       | 2kw, intake heater                   | 19. Exhaust system  | Local preparation         |
| 13 Driver's seat                             | Equipped with seat belt              | 20. Seat suspension | Equipped (air type)       |
| 14 Air conditioner                           | Equipped                             |                     |                           |

Note: All specifications of the products are with normal manufacturing allowances and tolerances.

Hino Motors, Ltd. reserve the right to alter specifications at any time without previous notice.

Figures of axle capacity can be changed by the operating conditions and specifications of equipments concerned.

When selecting optional equipment, consult Hino technical staff as the adaptation of some of the optional equipment on production line may require an extra lead time.



MODEL

HINO SH1EGKG CHASSIS

DRAWING No.

CDRSH314