

KATO

Rough Terrain Crane

KR-300

ROUGHTERR

ACS

Moment Limiter

Lifting Capacity

30 Ton
Metric



KATO WORKS CO.,LTD.

<https://cranemanuals.com>



Rooster sheave facilitates single-rope lifting operations



INCOMPARABLE



LOW DEFLECTION FULLY POWERED BOOM

- The tough fully powered boom utilizes a sequential, synchronized telescoping control system, and is designed to reduce vertical and lateral deflection during operation. The 28.4m boom and 12.1m jib provide a maximum lifting height of 41.5m.

WIDE OPERATING RANGE

- The forward-acting derricking cylinder gives the KR-300 a wide derricking range from 0 degrees to 80 degrees. The boom heel pin is positioned behind the cab to allow the operator a much wider range of vision and facilitate work at close quarters.

JIB WITH 3-STAGE OFFSET FOR CLOSE-IN AND HIGH-LIFT OPERATION

- The jib may be set at 5 degrees, 17 degrees, or 30 degrees for up and over reach. This is a real boon in close-in work during the construction of high-rise buildings and high-lift operation in cramped sites.

SWING-FORWARD JIB EASY TO MOUNT IN RESTRICTED SITES

- This swing-forward jib, which is stowed alongside the boom, is designed to be detached from the side of the boom by means of a hydraulic cylinder, and swung out in a forward direction into working position. This method requires far less space than swing-around jibs. Set-up is fast and simple.



WORK PERFORMANCE



DUAL WINCHES FEATURING AUTOMATIC & PEDAL BRAKE SYSTEM

• Two independently driven winches have been installed to provide powerful automatic brake and pedal-operated brake switchover. The automatic brake is activated during powered hoisting/lowering operations, while the pedal-operated brake is used for free-fall operations. The main and auxiliary winches are operated by separate levers so that individual hoisting and lowering operations can be carried out simultaneously.

STEPLESS SYSTEM FOR WINCH SPEED

• By means of a combined double circuit system, the speed of the main and auxiliary winches can be selected at will and high and low speed stepless switchover can be performed by lever operation without any reduction in hoisting capacity.



RELIABLE THREE TIRED SAFETY CONSTRUCTION

• The winch configuration includes three safety devices – automatic brakes, counterbalancing valves, and drum locks. These safeguards ensure safe, reliable operation in the knowledge that accidents stemming from operating errors will be prevented before they ever happen.

SPECIAL NON-ROTATING ROPE KEEPS HOOK FROM SPINNING

• Winch cables are made of a special non-rotating rope that will not tangle or twist. This not only prevents the hook from spinning, but also prevents damage to the cable itself and makes for smoother, safer operation.

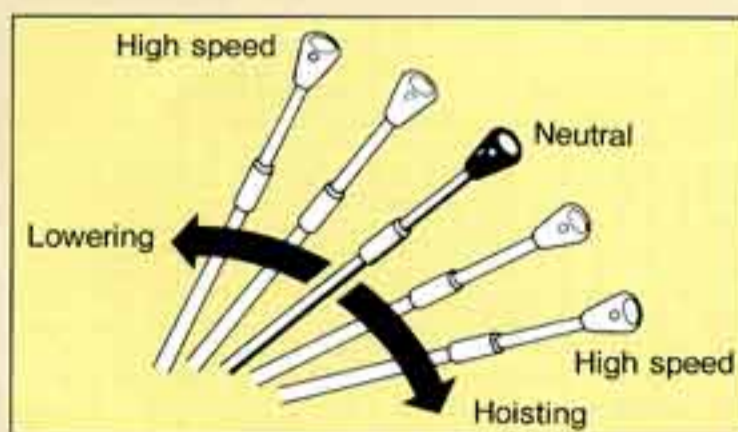
HIGHLY RELIABLE IRREGULAR WINDING PREVENTIVE DEVICE

• Grooved drums and irregular winding preventive device are provided to reduce wear and boosts rope life.



HIGH-PERFORMANCE TURBO ENGINE CAPABLE OF CONTINUOUS OPERATION OVER LONG PERIODS OF TIME

• This powerful turbocharged engine has a reputation for high output, low fuel-consumption, and low noise as well as all-round reliability. Its distinctive tenacity and enormous 215ps/2,800 rpm power output guarantee outstanding acceleration and the ability to operate efficiently in even the most adverse working conditions.



HIGH OUTPUT!
LOW FUEL CONSUMPTION!
LOW NOISE!
A HIGH-PERFORMANCE TURBO
ENGINE

WITH **215ps**

Large Cab Space for Easy Operation



SPACIOUS AND FUNCTIONAL CAB WITH FORWARD VISIBILITY A PRIME PRIORITY

• The spacious cab was designed with the operator in mind. Notice the ample leg room and comfortable interior, the increased forward visibility and the excellent ventilation. Important features like the ACS Moment Limiter and the various switches are located in easy-to-see, easy-to-reach places. This comfortable layout was planned to reduce operator fatigue and make operation easier and pleasanter.

ALL CONTROLS LOCATED CONVENIENTLY IN CAB

• All operations, including crane work, outrigger positioning, traveling, and pick & carry, can be controlled efficiently from the operator's cab.



ADJUSTABLE SEAT REDUCES FATIGUE DURING EXTENDED OPERATIONS

• The deluxe, fully adjustable operator's seat can be reclined at any angle, and moved forward or backward, up or down, to suit any operator of any size and build.



- (1) Sliding seat (6 levels)
- (2) Reclining mechanism (21 levels)
- (3) Height adjustment (5 levels)
- (4) Slope adjustment (8 degrees forward, 8 degrees backward)



SLEWING SYSTEM WITH FREE LOCK SWITCHING

• The operator can select a free slewing stop for normal repeat work, or lock slewing stop for high-lift operations or heavy work. A hydraulic slew-brake is also provided for safety.



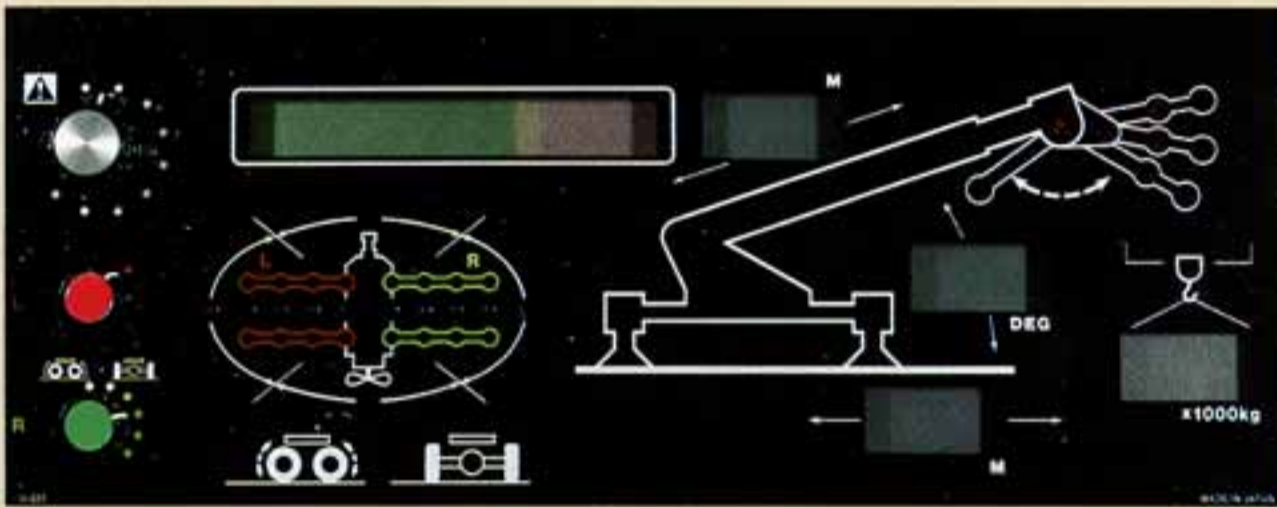
and Extra Comfort




UP-TO-THE-MINUTE MICROCOMPUTER-CONTROLLED ACS MOMENT LIMITER

• The ACS moment limiter is a fully automatic overload prevention device which utilizes the latest electronics technology to monitor all safety factors. It provides accurate information on up to seven safety factors, namely: safety levels (total moment), boom angle, working radius, boom length, critical load, actual load and maximum hook lift. The safety monitor comes in the form of a bar graph with colors indicating clearly the changing levels of safety.

The optional voice alarm will remind the operator to make preliminary checks or give warning of overloads and other operational instructions.

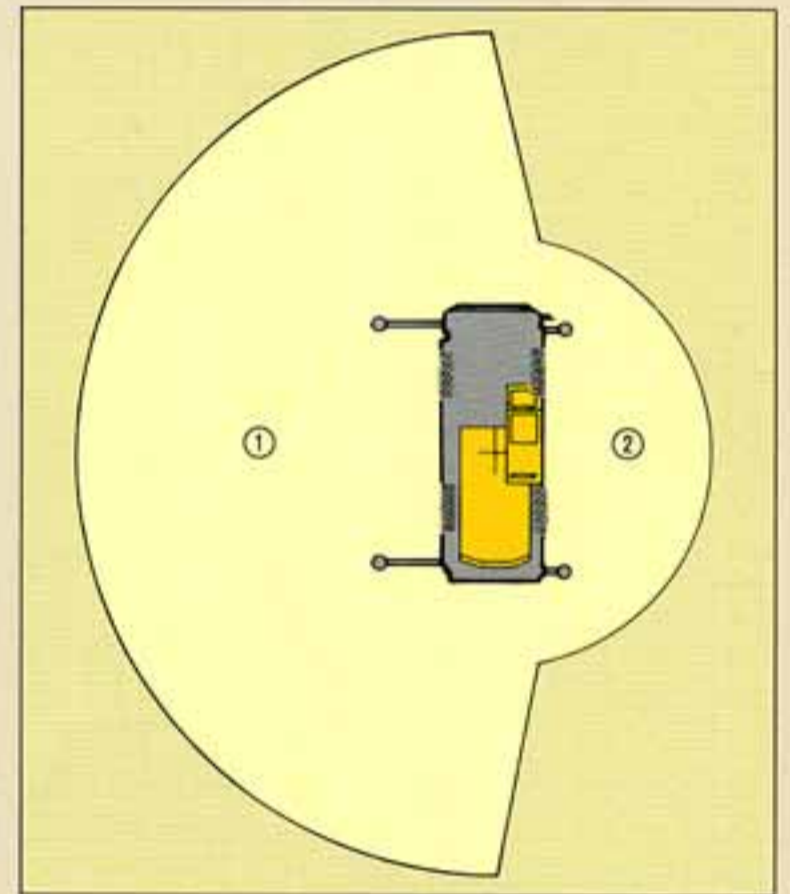


SAFETY EVEN WHEN ABNORMALITIES OR BREAKDOWNS OCCUR

• ACS compuload comes equipped with a trouble indicator to tell the operator in the unlikely event that something should go wrong with the ACS itself. The  symbol will light up and digital read-out will indicate the part affected.

ACS CONTROLS PERFORMANCE ACCORDING TO OUTRIGGER STATUS

• Even when left and right outriggers are extended to different lengths, The ACS moment limiter automatically compensate for the varying safe working loads.



- ① Working range at maximum stroke
- ② Working range at intermittent stroke



Quality is the Keyword for KATO's Safety



3 STEERING MODES MAKE IT EASY TO MANEUVER EVEN IN SMALL SITES

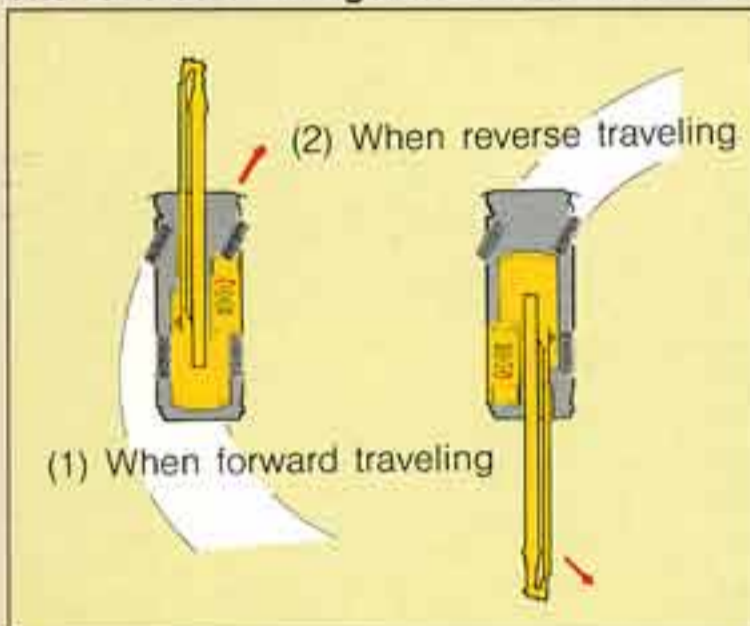
• The operator can select 2-wheel, 4-wheel or crab steering from the cab. In spite of its long wheelbase, the 4-wheel steering mode allows the Roughter to turn in a mere 5.3m radius. By combining this with the crab steering mode, the KR-300 can be maneuvered with ease even in tight working areas and narrow, twisting streets. The fully hydraulic power steering ensures light handling and easy turning.

CONVENIENT REVERSE STEERING CORRECTION MECHANISM PROVIDED

• The reverse steering correction mechanism allows the same instinctive steering operation with the superstructure facing forwards or backwards.

This handy mode lets the operator steer in the direction of travel regardless of which direction the superstructure faces.

The reverse steering correction mechanism



- (1) Forward travel: normal steering.
- (2) Reverse travel: When the superstructure advances in that direction, the operator can select the reverse steering correction mechanism at will so that the vehicle will turn in the same direction as the steering wheel.

DISC BRAKES FOR EXTRA SAFETY

• Front and rear wheels are equipped with disc brakes which feature excellent heat dispersion and outstanding braking power. Safe driving is guaranteed even when frequent stopping is required and on long downward slopes. The dual braking system combines a hydraulic system with a pneumatic one.

RELIABLE PARKING BRAKE

• A new, powerful, large capacity parking brake has been adopted. Service brake lock equipment is provided for parking on sloping ground.

RUGGED TRACTION TIRES

• With these traction tires (16.00-25-28PR (OR)), which are heat-resistant and have enormous load-bearing capacities, pick-and-carry operations and cruising at high speed can be performed in safety. They provide power and grip for operations on unimproved ground and bad roads as well as being ideally suited for traveling on soft ground and rugged terrain.



REAR WHEEL STEERING LOCK FOR GREATER SAFETY

• The rear wheel steering lock can be operated easily from inside the cab. The operator no longer has to crawl under the chassis to lock the steering.

THE AUTOMATIC "LOCK- UP" CLUTCH PROVIDES INCREDIBLE FUEL EFFICIENCY

• A brand new torque converter has been adopted that can automatically lock the clutch at any of the 3 available speeds during normal traveling. A new transmission with an efficient gear ratio has also been added and these features combine with the turbo engine to produce superb acceleration and fuel efficiency. What's more, the operator can switch from 2-wheel to 4-wheel drive easily.

CONTINUOUS TRAVELING AT 57 km/h TOUGH, STABLE CHASSIS

• The powerful transmission, which delivers a constant 215ps of power, is equipped with high/low speed selection. The operator may select the most appropriate speed for the particular road conditions from among 6 forward and 6 reverse gear speeds. The cruising speed of 57 km/h in top gear makes it possible to save valuable time when moving from site to site.



and Reliability



WIDE OUTRIGGERS FOR COMPLETE SAFETY

• The KR-300 comes with two sturdy sets of outriggers, the H-type and the X-type. Both provide a wide extension span for guaranteed operating performance.

H-type outriggers can be set for four extension spans of 6.2m, 5.0m, 3.7m and 2.2m (the X-type can be set for three). Both types give the crane extra stability for operating performance even on very small sites. Both vertical and horizontal cylinders are fully independent, telescoping types that can be set up quickly on uneven terrain.

CAREFULLY DESIGNED SAFETY FEATURES

• Safety was a prime consideration during the design of the KR-300. Among the numerous safety features incorporated are the ACS Compuload, an over-hoisting prevention device, a slewing lock, a boom derricking safety device, automatic brakes, an outrigger locking mechanism, hydraulic relief valves, and much more.

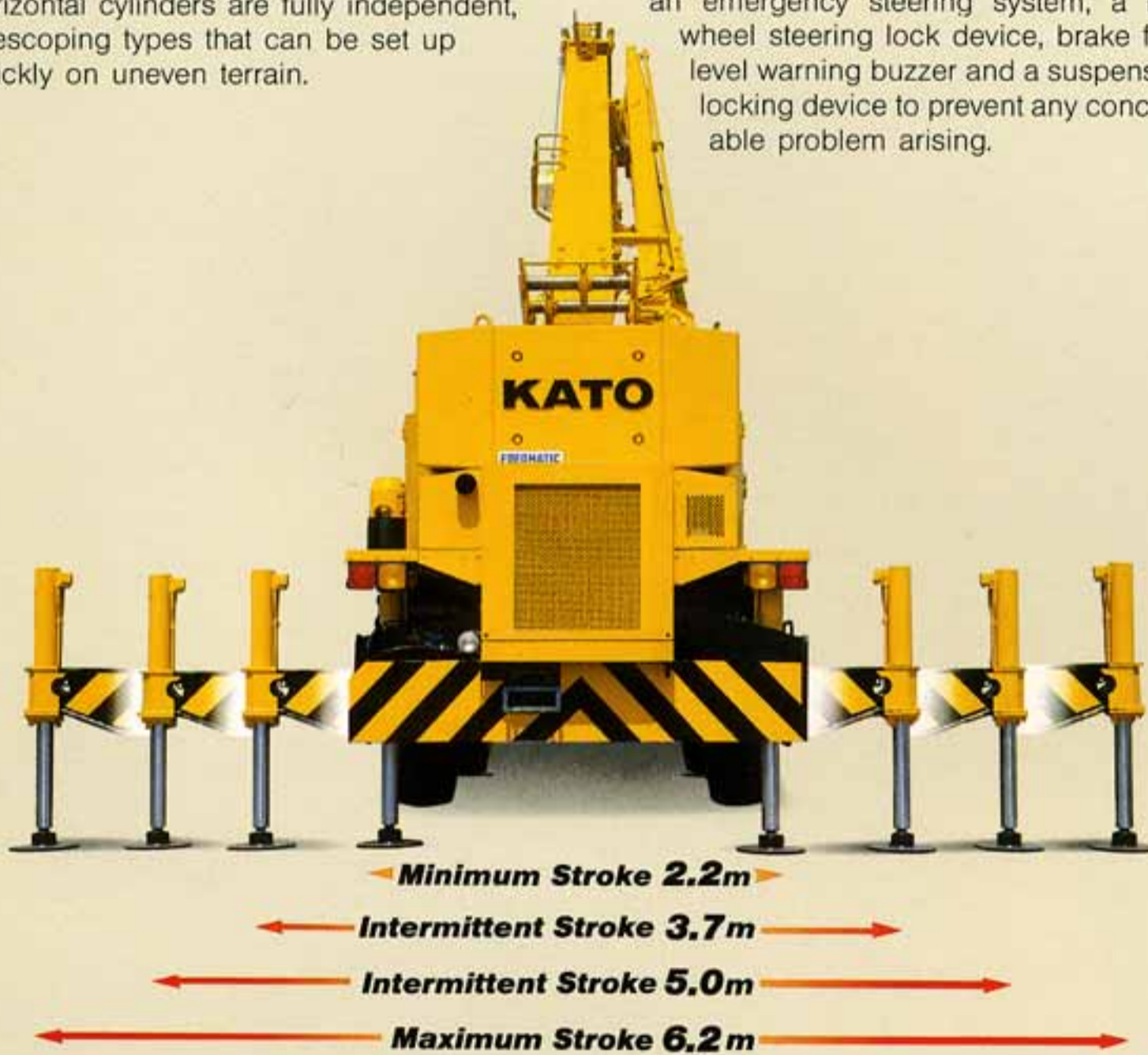
• For safety while traveling, an overshift prevention device has been installed together with an emergency steering system, a rear wheel steering lock device, brake fluid level warning buzzer and a suspension locking device to prevent any conceivable problem arising.

STEADY PICK AND CARRY

• The sturdy carrier frame and heavy-duty tires with huge load-bearing capacities provide excellent stability. Springs can be locked from inside the cab with a single flick of a switch for easy pick-and-carry operations and greatly reduced cycle time.

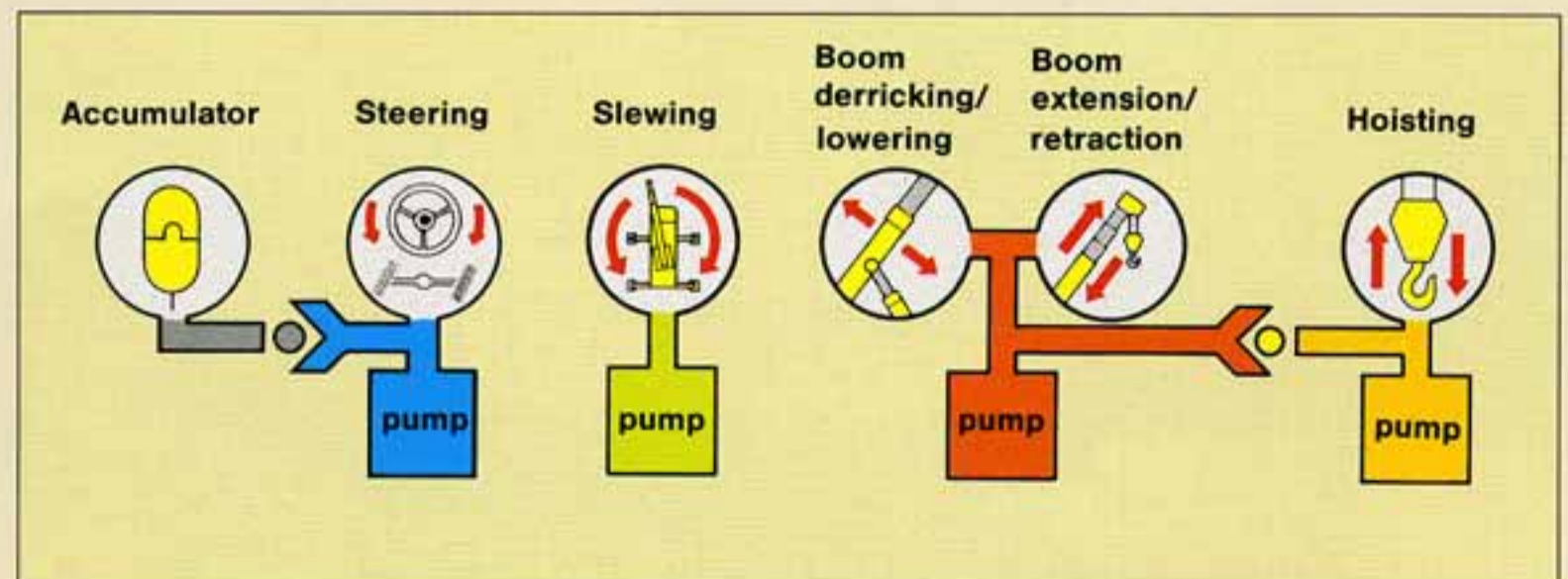
EASY CHECKING AND MAINTENANCE

• Vital parts such as the engine, torque converter, and transmission are already highly valued for their durability and reliability. These parts are sturdy and hardly ever malfunction, plus design is carefully thought out so as to facilitate maintenance checks and lubrication.



4-PUMP SYSTEM FOR SMOOTH COMPOUND OPERATIONS

• The use of 4 separate pumps enables the KR-300 to perform 3 operations simultaneously, such as hoisting + boom telescoping + slewing, or hoisting + boom derricking + slewing, without these operations affecting either each other or the hydraulic regeneration of the accumulator. This makes operation smoother and more efficient.



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NOTE: Illustrations may include optional equipment. KATO products and specifications are subject to improvements and changes without notice.



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