

**Leaders Lead**  
KOBELCO  
*The New*  
**G Series**  
(Interim Tier IV Compliant)

CK850G CK2750G CK1200G  
CK1100G CK1600G



**KOBELCO** KOBELCO CRANES NORTH AMERICA, INC.  
*Reliability is the History of Quality*  
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# CK G series



# NEW MODEL LINE-UP

**GR850G**

85 usTon

**GR1100G**

110 usTon

**GR1200G**

120 usTon

**NEW**

**GR1600G**

160 usTon

**GR2750G**

275 usTon

• CK2000II REPLACEMENT - INTRO EARLY 2012

# COMPONENT INTERCHANGEABILITY

## *G series*

**NOTE: CHANGES HIGHLIGHTED IN RED**

MODEL	BOOM/INT	JIB/INT	LUFF/INT	AUX SHEAVE INT	ENG HP new/old	WIRE ROPE
<b>CK850G</b> ◀▶	200'/YES**	60'/YES	NOT AVAIL.	YES	<b>285/215</b>	22mm (6 strand)
<b>CK1100G</b> ◀▶	200'/YES**	60'/YES	<b>NOT AVAIL.</b>	YES	<b>285/331</b>	26mm (6 strand)
<b>CK1200G</b> ◀▶	230'/Ins. & tip**	100'/YES	170'/YES	YES	<b>285/331</b>	26mm (6 strand)
<b>CK1600G</b> ◀▶	250'/YES**	100'/YES	170'/YES	YES	<b>363/331</b>	26mm (uni 3 RR)
<b>CK2750G</b> ◀▶	300'/Inserts*	100'/YES	<b>200'/NO</b>	YES	<b>363/331</b>	26mm ( <b>uni 3 RR</b> )

\* Different Pendants

\*\* Diff Backstops & electrical connectors

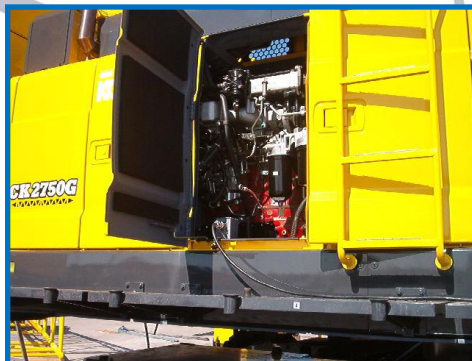
# “G” SERIES

**REQUIRED TIER 3.5 ENGINE  
COMBINED WITH KOBELCO FUEL SAVINGS TECHNOLOGY**

## 1.) TIER 3.5 HINO ENGINE WITH “DPR” and “EGR” TECHNOLOGY

### REDUCES

- Particulate Matter
- NOx
- Noise Level



## 2.) EXCLUSIVE “G” MODES

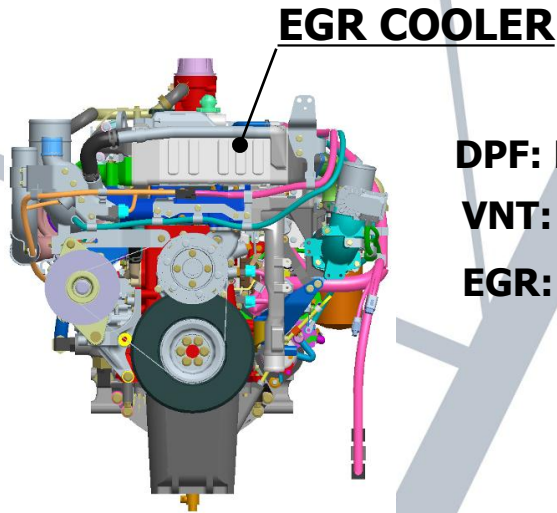
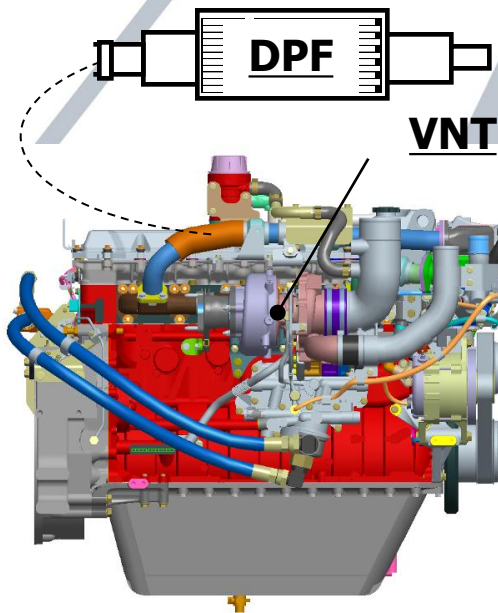
- AIS
- G WINCH
- G ENGINE

(ALL OPERATOR SELECTABLE)





# **REDESIGNED HINO ENGINES (TIER 3.5)**

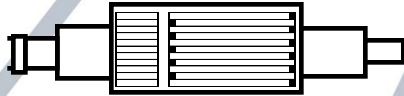


**DPF: Diesel Particulate Filter**  
**VNT: Variable Nozzle Turbo**  
**EGR: Exhaust Gas Recirculation**

**KCNA & KCNA DEALERS REMAIN AS WARRANTY/SERVICE SUPPORT**

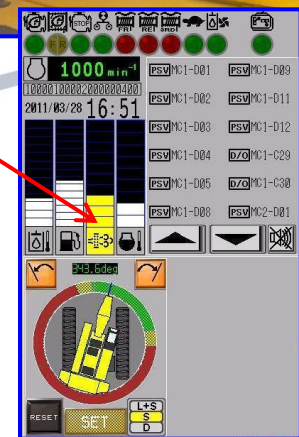
- Required fuel: Low Sulfur - containing 50ppm or less

# WHAT IS A DIESEL PARTICULATE FILTER? (DPF)



**LARGE FILTER THAT TRAPS DIESEL PARTICULATE MATTER & PERIODICALLY BURNS/CLEANS THE COLLECTED EXHAUST PARTICLES**

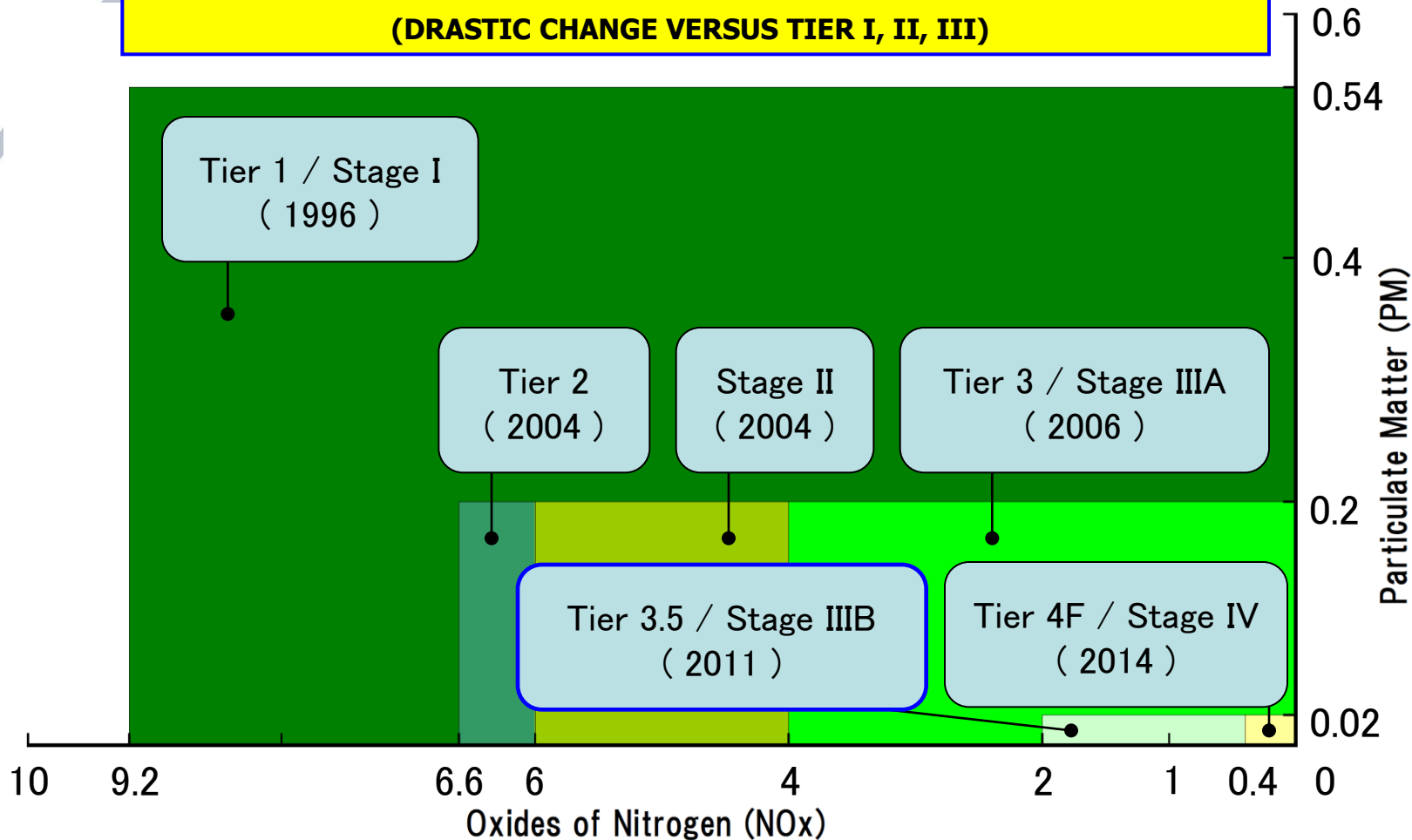
- BURNS/CLEANS ITSELF AUTOMATICALLY EVERY 10 HOURS
- OPERATOR HAS OVER-RIDE OPTION
- GRADUATED SCALE WARNING DISPLAYS TO OPERATOR
- REPLACEMENT INTERVAL APPROX 4000 – 5000 HOURS



# EPA REQUIREMENTS

## TIER 3.5 & TIER 4 EMISSIONS REDUCTION REQUIREMENT

(DRASTIC CHANGE VERSUS TIER I, II, III)



# **WORLDWIDE EMISSION REQUIREMENTS**

## **UNITED STATES**

**Safety: OSHA standard  
Rating: ANSI standard  
Emission: EPA Tier 3.5**

## **EUROPEAN UNION**

**Safety: EN13000 standard  
Rating: EN13000 standard  
Emission: EURO Stage IIIB**

## **JAPAN**

**Safety: Mobile crane standard  
Rating: Mobile crane standard  
Emission: 2011 Regulation**

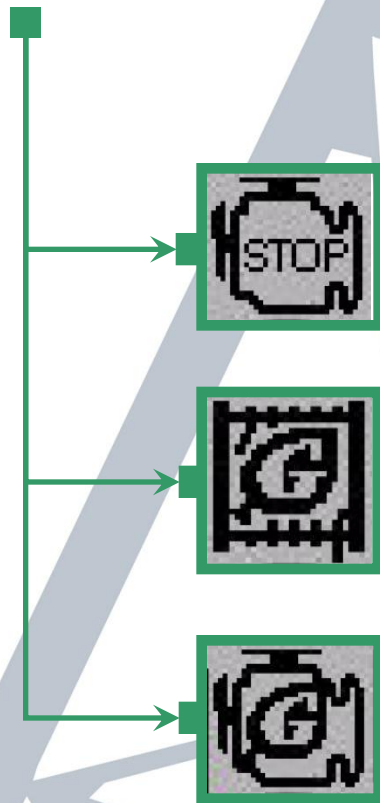


# EXCLUSIVE ENERGY/FUEL SAVING SYSTEM



**3 BASIC MODES**

**ALL OPERATOR SELECTABLE**



**AIS MODE (Auto Idling Stop mode)**

**G-WINCH MODE (Green winch mode)**

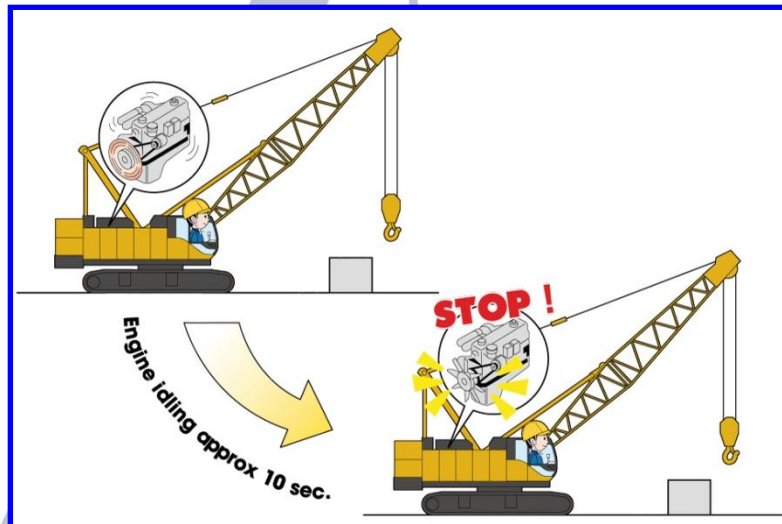
**G-ENGINE MODE (Green engine mode)**



# AIS MODE

**THE AIS MODE** can conserve fuel by stopping the engine **-with an operator prompt** -after 10 seconds of idling time. Restarting the engine is simple by just twisting the accelerator grip.

## AIS CONDITIONS OF OPERATION (SAFETY CONSIDERATION)...



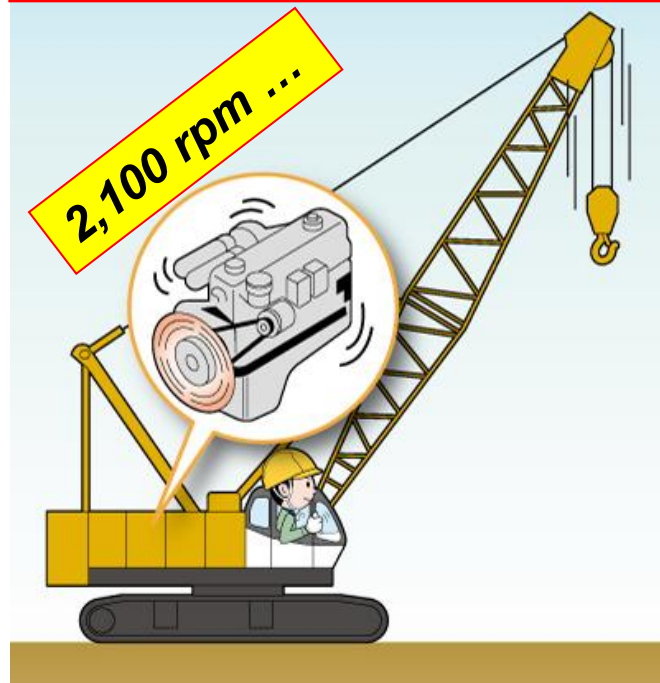
- Hyd. Oil temperature : 60 F or less
- Coolant temperature : 105 F to 175F
- Low engine rpm : 800 +/-40 rpm
- Winch mode : Brake mode
- Boom angle : 5 degree before max. angle
- Lifting load : No. of reeving x 2,200 lbs. (max. 11,000 lbs)
- Swing parking brake : ON
- LMI release switch : LOCK
- Error code : None

**NOTE:** AIS air-conditioner is available in option.

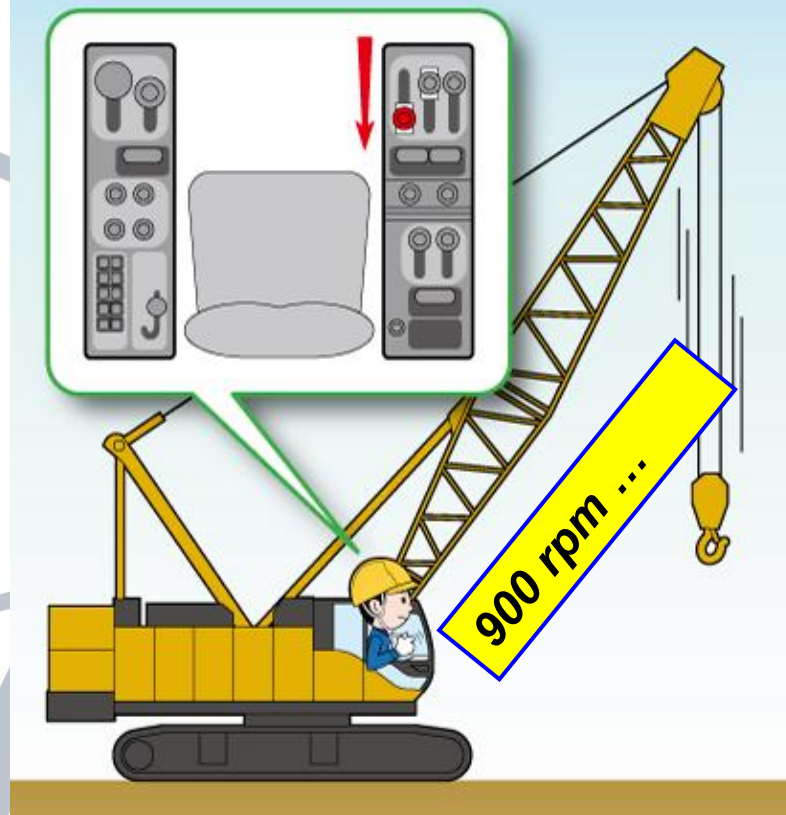


# G-WINCH MODE

**BEFORE** – Even No-Load lifting required full engine RPM to obtain max line speed



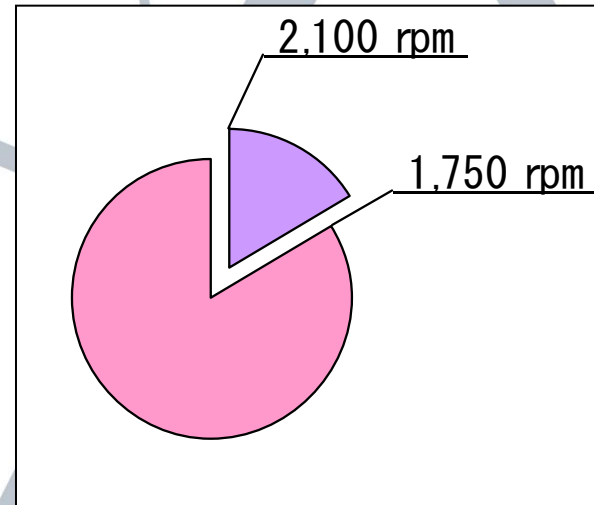
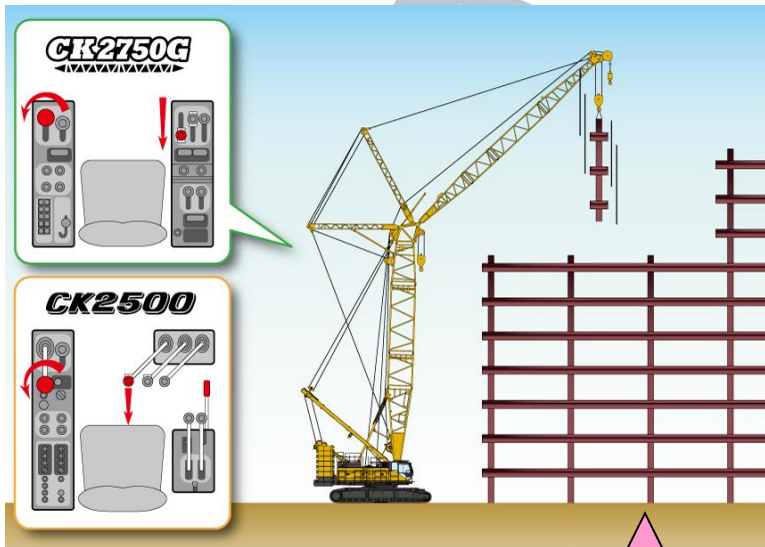
**NOW** – THE G-WINCH MODE  
Can produce maximum winch line speed –  
**EVEN AT LOW ENGINE RPM**





# G-ENGINE MODE

**THE G-ENGINE MODE** -limits maximum engine speed to 1,750 RPM and controls the pumps to make engine operate in the most efficient condition.



Same speed

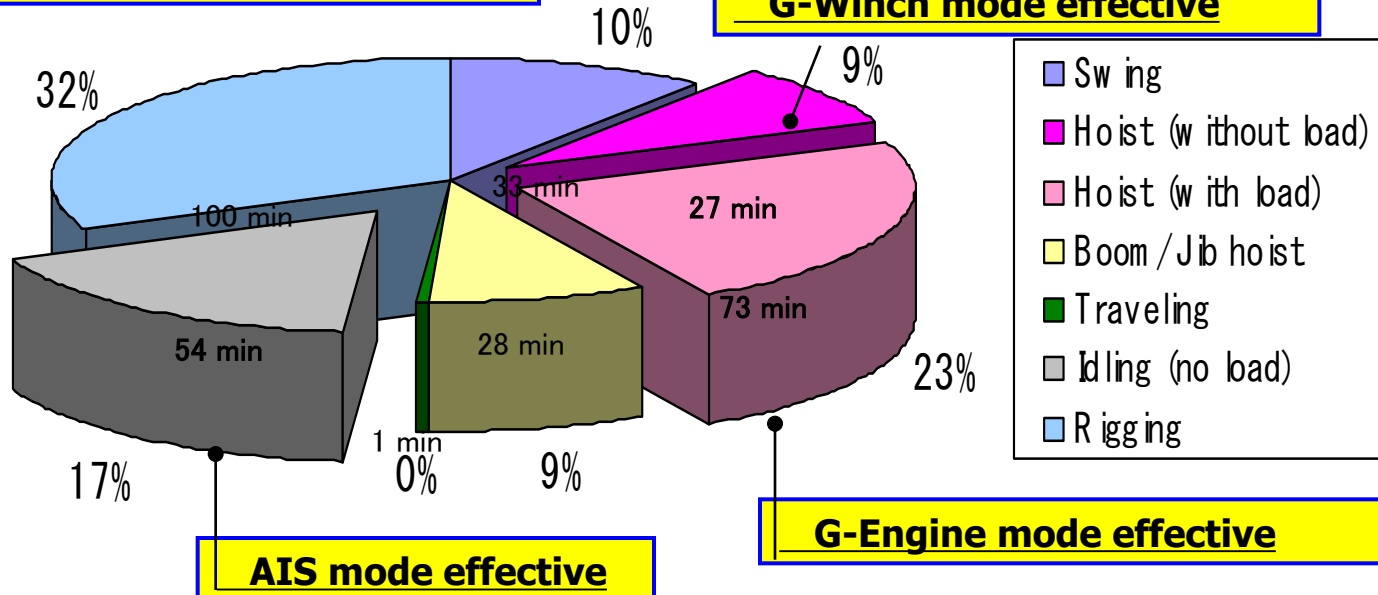
**BEFORE** – an operator may have chose to operate at full engine RPM but not engage the control lever fully, therefore using more fuel to produce the same line speed.



# HOW MUCH FUEL CAN BE SAVED ?

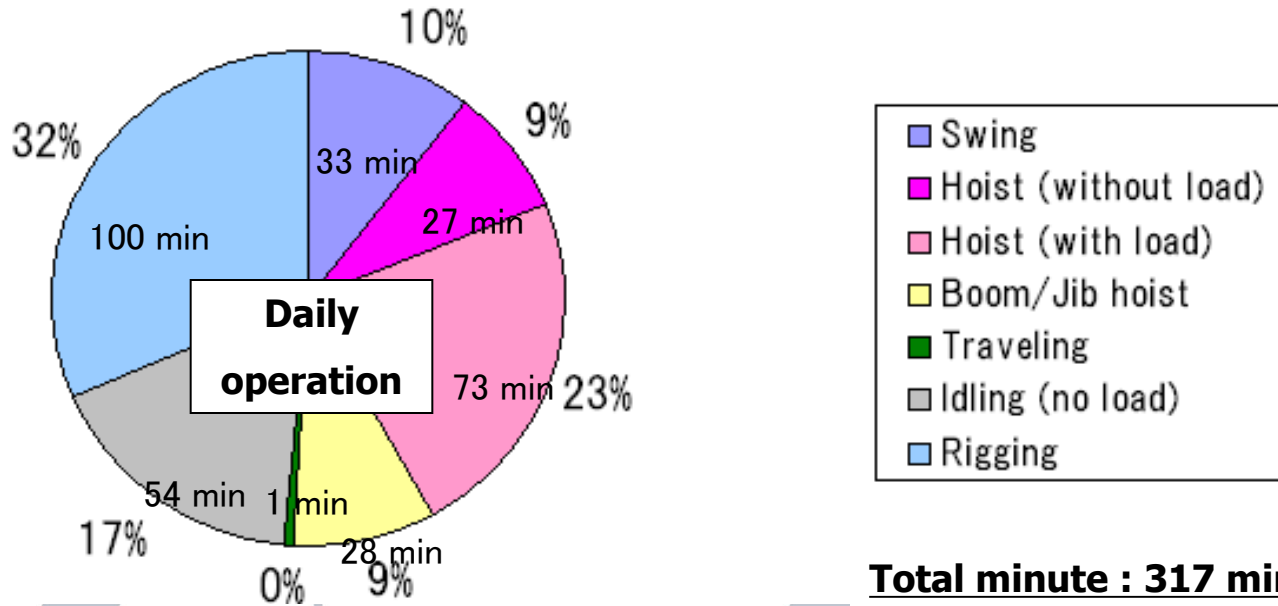
**ACTUAL JOB SITE DATA**, constructing an 8 floor building with a Kobelco CK1600II Luffing Jib with 150ft main + 100ft jib, handling steel beams (2,200 lbs to 11,000 lbs). The graph shows daily operating minutes of each function as a percentage of total time.

**Total minute : 317 min/day**



# FUEL SAVINGS CALCULATION

(From KCROSS info : 21.1 gal fuel used without G-modes)



## G-MODE FUEL SAVINGS / BY MODE

+ AIS : 1.2 gal / day

+ G-Winch : 2.4 gal / day

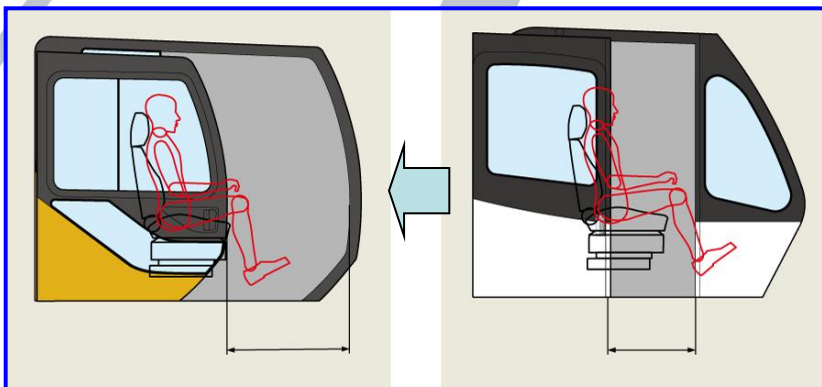
+ G-Engine : 0.3 gal / day

**TOTAL= 3.9 GALLON/DAY = 18% SAVINGS**

# NEW CAB DESIGN

**NEW**

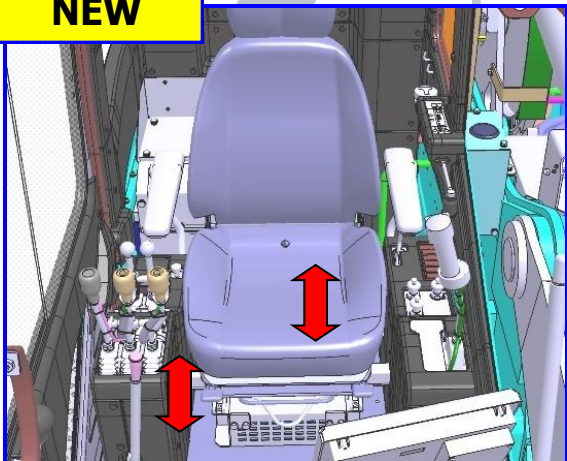
**PREVIOUS**



**ISOLATED CAB BASE FRAME**  
\* Reduces vibration

- ADDITIONAL LEG/FOOT ROOM
- EASE OF ENTRY
- WIDER DOOR

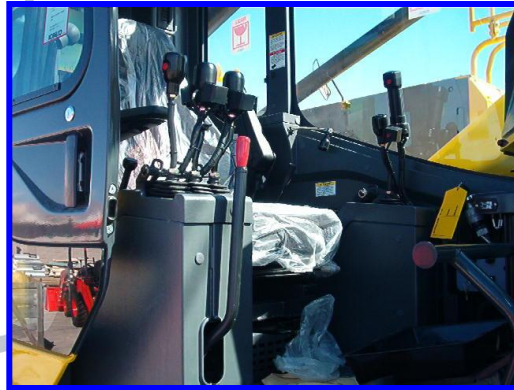
**NEW**



Independently adjustable lever position and operator seat.



# NEW CAB DESIGN



**REPOSITIONED – HOIST CONTROL LEVERS - DRUM SPEED CONTROLS - TRAVEL CONTROLS**

**PREVIOUS**



# **NEW CAB DESIGN – CONTROL LAYOUT**

- INCREASED OPERATOR'S FIELD OF VISION
- INCREASED AIR CONDITIONER OUTPUT + 10%

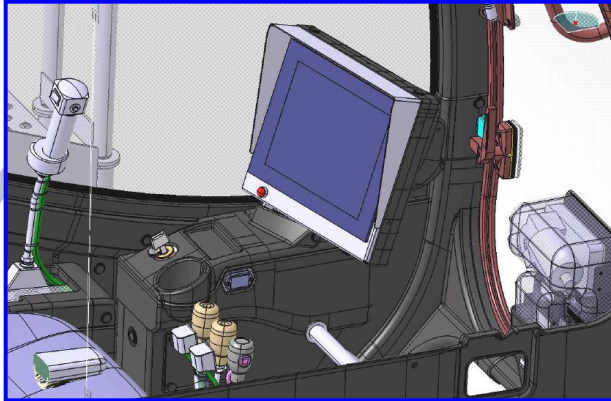
**NEW**



**PREVIOUS**

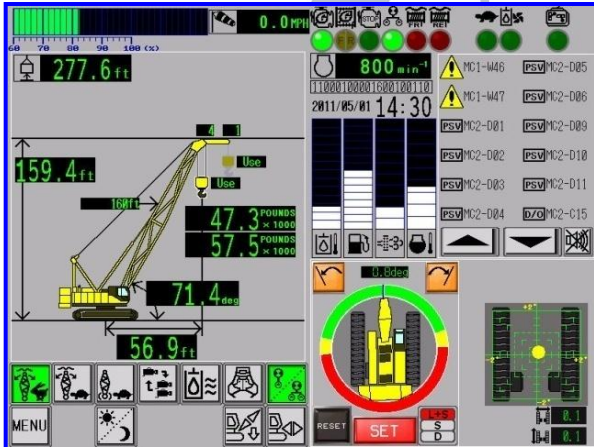


# NEW CAB - LMI



**KOBELCO DESIGNED & WARRANTED**

12" touch panel screen with sunshade & screen protector –



**EASY TO PROGRAM –**

Easy to read and understand information



**PREVIOUS LMI**



**PREVIOUS GAUGE CLUSTER**

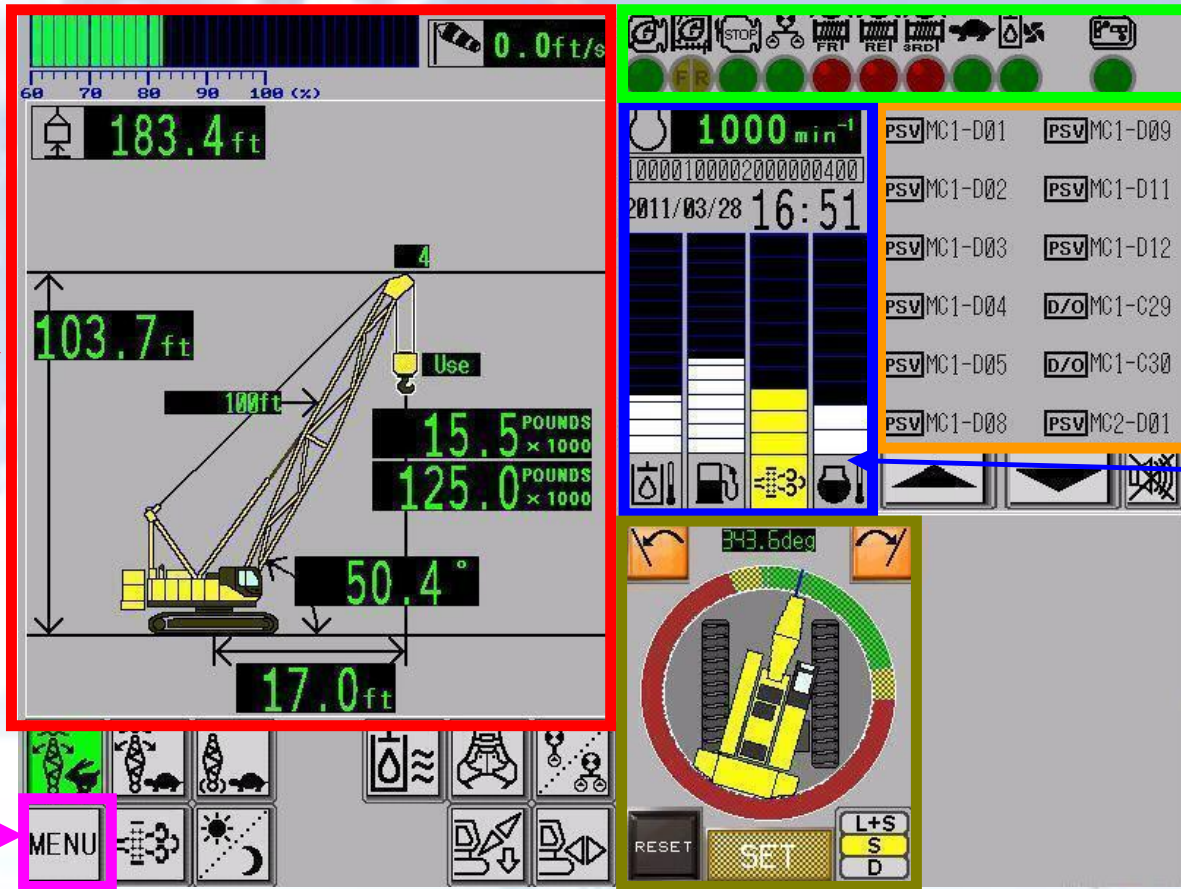


# Monitor Overview

Moment Limiter

Menu Button

Keep this inside the cab



Mode ON/OFF Indicators

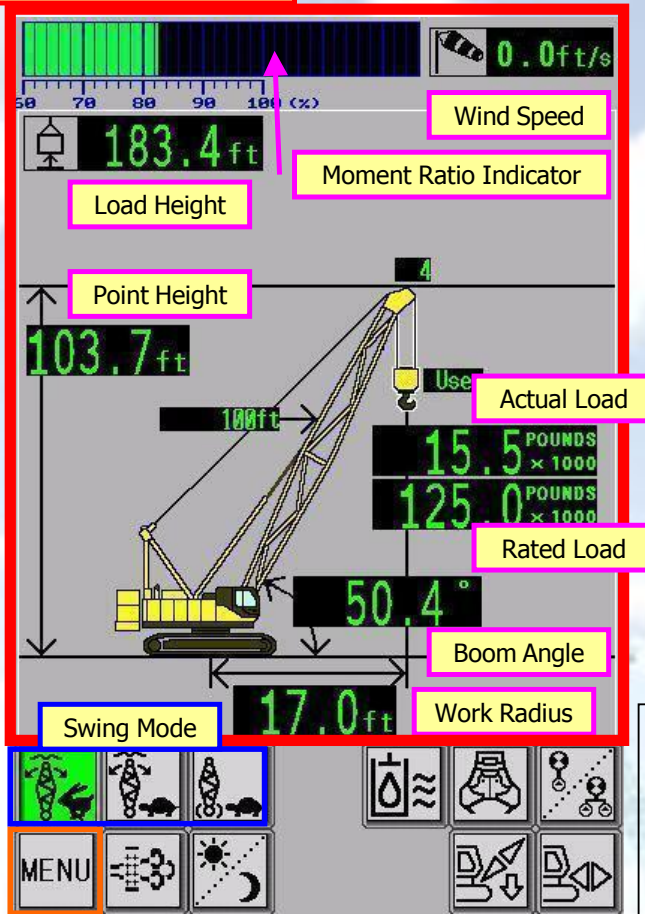
Error / Warning Display

Gauges

Swing Limitation Device

# [Left Side] Moment Limiter

## Moment Limiter



## Adjustment Menu



## Main Menu



- Hyd. Heater
- DPF Re-gen
- Boom Down
- Pump Mode SW
- Monitor Dimmer
- Assembly Mode

**Keep this inside the cab**



# [Right Side] Gauges

**G mode Indicators**

G-Engine  
G-Winch  
AIS (Auto Idling Stop)

**Mode ON/OFF Indicators**

Dual Pump Mode  
Free Fall Mode  
Inching Mode  
Oil Cooler  
Remote

1000 min<sup>-1</sup>  
2011/03/28 16:51  
PSV MC1-D01 PSV MC1-D09  
PSV MC1-D02 PSV MC1-D11  
PSV MC1-D03 PSV MC1-D12  
PSV MC1-D04 D/O MC1-C29  
PSV MC1-D05 D/O MC1-C30  
PSV MC1-D08 PSV MC2-D01

343.6deg

RESET SET L+S S D

- Hyd. Oil Temp. Gauge
- Fuel Gauge
- Soot Accum. Gauge
- E/G Coolant Temp. Gauge

Click on warning to see the details!

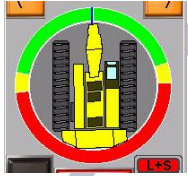
**Swing Limitation Device**

- Allowed
- Pre-warning
- Prohibited
- Left Limit Set
- Right Limit Set

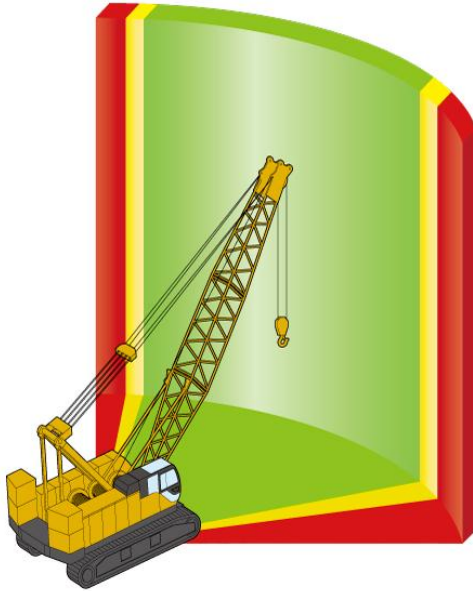
- L+S Alarm & Stop
- S Alarm only
- D Display only

Keep this inside the cab

# SWING LIMITER



**ENSURES ADDITIONAL JOBSITE SAFETY**



**3 MODES – OPERATOR CHOOSES**

**D MODE: WARNING LIGHT    S MODE: ALARM    LS MODE: ALARM & STOP**



# IMPROVED HYDRAULIC CONTROL CIRCUIT



## "SINGLE" OR "DOUBLE" - PUMP FLOW ABILITY

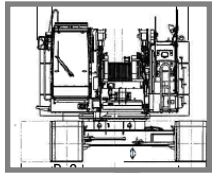
### SINGLE PUMP

- ALLOWS TWO WINCHES TO BE CONTROLLED INDEPENDENTLY
- \* LUFFING

### DOUBLE PUMP

- MAXIMIZE SPEED IN SINGLE LINE OPERATION
- SYNCHRONIZE SPEED IN DOUBLE LINE OPERATION
- \* STEEL ERECTION
- \* BRIDGE WORK
- \* CLAMSHELL
- \* PILEDRIVING

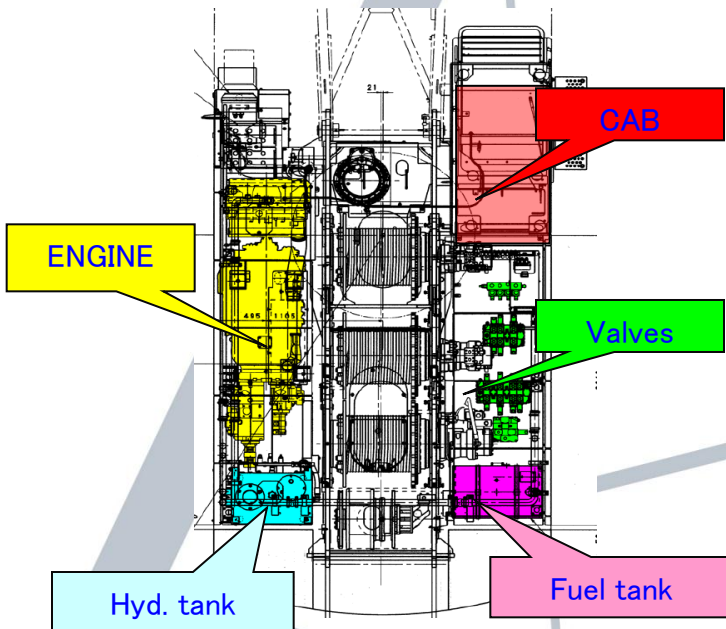
MODEL	HYD PUMP FLOW	OPERATOR SELECT	HYD PUMP FLOW	OPERATOR SELECT	MODEL
<b>CK850G</b>	DUAL	NO	SINGLE	NO	CK850III
<b>CK1100G</b>	DUAL	NO	DUAL	NO	CK1000III
<b>CK1200G</b>	SINGLE or DUAL	YES	SINGLE	NO	NOT AVAIL
<b>CK1600G</b>	SINGLE or DUAL	YES	SINGLE	NO	CK1600II
<b>CK2750G</b>	SINGLE or DUAL	YES	SINGLE	NO	CK2500II



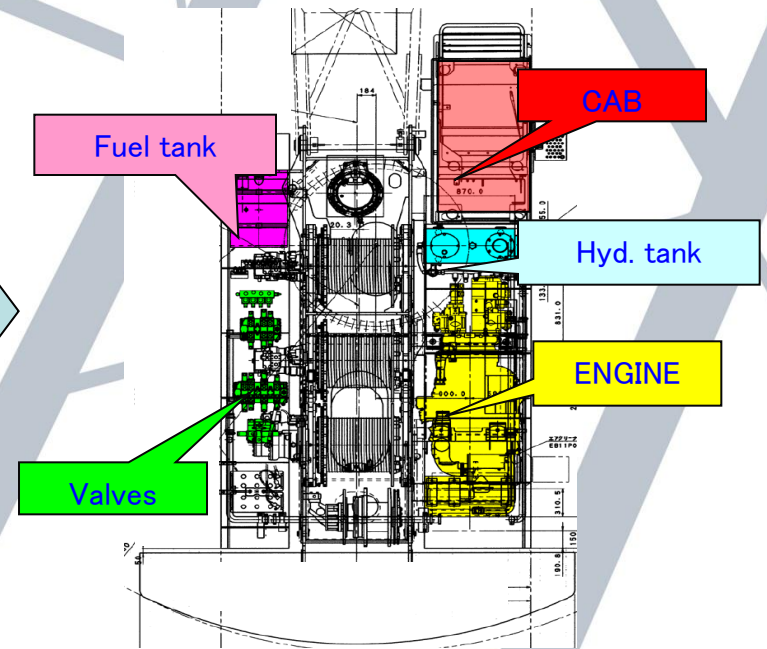
# REDESIGNED COMPONENT LAYOUT

- REDUCTIONS IN TRANSPORT WIDTH
- REDUCTIONS IN TRANSPORT WEIGHT

**PREVIOUS**



**NEW**

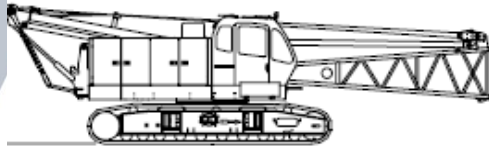




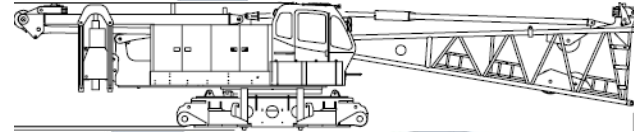


# REDUCED TRANSPORT WEIGHT

MODEL	TRANSPORT WEIGHT	TRANSPORT WEIGHT	MODEL
<b>CK850G</b> ◀▶	91,677	89,980	CK850III
<b>CK1100G</b> ◀▶	95,128	99,970	CK1000III
<b>CK1200G</b> ◀▶	74,206	94,050	NOT AVAIL
<b>CK1600G</b> ◀▶	84,193	88,180	CK1600II
<b>CK2750G</b> ◀▶	99,760	99,000	CK2500II



CK850 & CK1000/1100



CK1200 & CK1600



CK2500/2750



# **CK850G - CK1100G - CK1200G ASSEMBLY IMPROVEMENT**

## **NEW REAR COUNTERWEIGHT**



## **PREVIOUS CWT**



## **NEW ON CK110G - SWING AWAY AXLE EXTENSIONS**



**NEW ON CK1100G**



**PREVIOUS ON CK1000**

- **QUICKER ASSEMBLY**
- **EASIER TO HANDLE/RIG**
- **EASIER TRANSPORT**
- **COMMONALITY**

# **INCREASED TRAVEL MOTOR TORQUE**

**APPROX 5% - 10% INCREASE**



**CK850G**

**CK1100G**

**CK2750G**

**IMPROVED TRAVEL/COUNTER-ROTATION IN ADVERSE GROUND CONDITIONS**



# **IMPROVED WIRING CONNECTION**

**UNIQUE CONNECTORS**

**ALL MODELS – IN UPPER FRAME BASE**



**CK2750G – ADD'L CONNECTIONS IN BOOM BASE**

# IMPROVED MAINTENANCE ACCESS

**NEW LADDER FOR ACCESS TO UPPER**



**HANDRAILS**





**KOBELCO**

***G series***



**THANK YOU!**

**KOBELCO CRANES CO., LTD.**