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For Starters in the catalogue without Part Numbers, CAE is able to supply but we require the original starter motor to establish required specifications.

Updated: 13/05/2014

WARRANTY

The manufacturers warranty on Hi-Torque products is for a period of one (1) year, covering the Starter Motor ONLY. The warranty is subject to the following conditions

- * All claims must be made within the warranty period.
- * Any Starter Motors found to have faulty workmanship will be replaced free of charge.
- * This warranty does not apply to Starter Motors that have been subject to neglect, misuse, abuse, accidental or intentional damage, unauthorized repairs, modifications, incorrect application or installation.
- * Castle Headers recommend that this product be fitted by qualified personnel
- * The warranty does not cover the cost of freight, installation or removal of Starter Motors.
- * The warranty only applies to Starter Motors used for normal use

ORDERING

Orders can be placed by phone, fax or email. We prefer official purchase orders from account customers. Please quote the part number, quantity and any special requirements when ordering.

SHIPPING

All orders are despatched upon payment (except account customers). We ship Australia-wide everyday. We can do C.O.D using Australia Post (conditions apply). If you wish to use your own courier, please advise us your account details and courier name and we can organise pick-up.

SPECIFICATIONS

Check all specifications prior to ordering, as some starters are identical to others except for which side they mount on, pinion teeth & diameter and the pinion at rest measurement.

RETURN OF GOODS

All parts returned will incur a 15% re-stocking fee. Freight is to be paid by customer unless the goods are being returned due to manufacturing defect or shipping error, in which case they are to be shipped using our Australia Post Reply Paid account. C.O.D. post will NOT be accepted under any circumstances. Goods specifically made to customers requests cannot be returned for credit. All goods remain the property of Castle Automotive Enterprises until paid for in full.

DAMAGE

All goods are shipped in good condition and are packed accordingly. We can only handle damage claims for prepaid freight.

PAYMENT

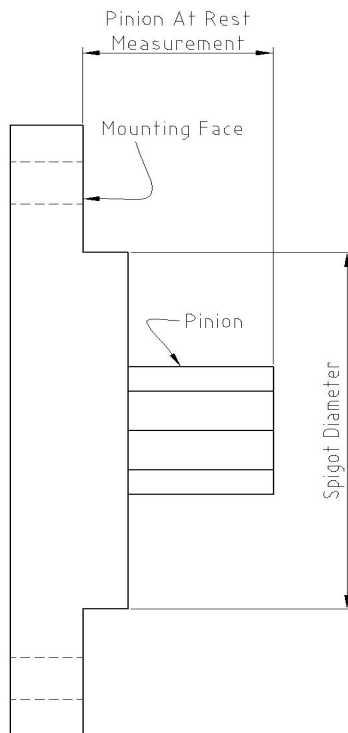
Payment can be made by credit card (Visa, Mastercard and Bankcard only), direct deposit, cheque/money order or cash over the counter. Please note that cheques and money orders must include the full amount of the order and freight costs.

CATALOGUE INFORMATION

Below is some useful information that will help you use this catalogue correctly

Pinion at Rest Measurement

This is the measurement from the outer edge of the starter motors pinion to the mounting face. Gear Reduction starter motors require a clearance of 2.55mm (± 1 mm) between the tip of the pinion and the ring gear. The pinion at rest measurement can also be taken by measuring the distance from the mounting face to the ring gear, then subtracting 2.55mm. See diagram below



Spigot Diameter

This is the diameter of the spigot that locates the starter motor on the vehicle. This measurement is usually .05-.15mm smaller than the actual diameter it locates in on the vehicle.

Operating Voltage

This catalogue specifies what voltage the starter is designed for. This will either be 12v or 24v. USING 12v STARTERS ON 24v SYSTEMS WILL DAMAGE STARTER AND VOID WARRANTY.
12v Starters are fine to use with 16v batteries.

Rotational End Blocks

Almost all Hi-Torque Gear Reduction Starter Motors feature a rotational end block. This gives the customer the ability to rotate the body of the starter to obtain to correct clearance. This is done by simply removing the three screws that hold the aluminium block on, rotating the starter and then putting the screws back in.

AUSTIN

Austin K2 Truck 1948

G/R-30AUST-K2

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	22.5	3 Hole 03x103x146mm	12	2.0Kw	92	1mm slotte	R LHSw

• Note: Replaces Lucas M45G-270244/26038

BELARUS, MINSK

Belarus 400 Series

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	32mm	3 Hole 27/127/127mm	12	3.0Kw	92	17	R LHSw

• Note: 9T x 35mm Pinion replaces 10T x 36mm original Pinion

BELARUS, MINSK

Belarus 400 Series

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	32mm	3 Hole 27/127/127mm	12	3.0Kw	92	17	R LHSw

• Note: 9T x 35mm Pinion replaces 10T x 36mm original Pinion

Belarus 900 Series

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	32mm	3 Hole 27/127/127mm	24	4.5 Kw	100mm	13mm	L RHS

• Note: 9T x 35mm Pinion replaces 10T x 36mm original Pinion

BOBCAT-CLARK

Bobcat 753, 763, 773

S/N 2214

Kubota F Series Engine and 2203V Engines 1990 - on

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	48mm	3 Hole 127/90/90	12	3.0Kw	88.8mm	11.5mm	R LHS

Note: Can be assembled from G/R25/Kit A

Bobcat 2cyl Skid Steer 1989

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	21mm	2 Hole 120mm	12	1.4 Kw	95mm	13mm	Behind Ring Gear

• Counter clock-wise rotation

Clark, Bobcat 671, 741,

Replaces Delco 20Mt Starters

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90	12	3.0Kw	89	10mm	L RHS

Note: Can be Assembled from G/R-25 KitA

Clark Skid Steer 863H, 873

S/N 2263

With BF4M1011 Engine 1996 - on

S/N 8642

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	20mm	3 Hole 127/90/90	12	2.5 Kw	89mm	11mm	R LHS

Clark Forklift

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	21mm	3 Hole 127/90/90mm	12	3.0 Kw	89	10mm	L RHS

Note: Can be assembled from G/R 25/KitA

BEDFORD

300 Cu.In 6Cyl Petrol

G/R-07

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	2 Hole 146mm	12	1.9Kw	92mm	11mm	R. LHS

- Replaces Lucas M45-26043A + E and M45G-26314A
- Original Starter is 3 Bolt Mount

C.A.V.

CAV BS5

G/R-25/BS5-DORMAN

DORMAN DIESEL GENERATOR

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	50.2mm	3 Hole 27x127x127mm	24	4.5Kw	92mm	11mm	L or R Advise

- Please advise which side starter motor mounts on
- Replaces the BS5 Starter

CAV SL5

G/R-25/SL5

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	45.75mm	46.5mm	3 Hole 03/103/146mm	24	4.5Kw	92mm	16.6mm	L or R Advise

- Please advise which side starter motor mounts on

CAV 45G

G/R-25/CAV45G

Suit FORD D SERIES ENGINE

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22mm	3 Hole 146x103x103	12 or 24	4.5KW	92mm	11mm	L or R Advise
				Advise				

- Please advise which side starter motor mounts on

CAV 45D

G/R-25/CAV45D

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	Various 16 - 48	3 Hole 127/90/90mm	12 or 24	3.0 or 4.5	89	11mm	L or R Advise
				Advise				

- Please advise which side starter motor mounts on

Note: Use a CAE-311 and CAE-314 Spacers to achieve the correct pinion outer mesh

All CAV45 Series Starters can be built by using our G/R-25 Kit A.

G/R-25 KitA consists of all Pinions, Mounting End Blocks, and various Spacers required.

CAV 45D & 45F - 12 and 24Volt

G/R-25/CAV45F

Replaces baxter - PtNo 13216033

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	Various 16 - 48	3 Hole 127/90/90mm	12 or 24	3.0 or 4.5	89	11mm	L or R Advise
				Advise				

- Please advise which side starter motor mounts on

Note: Use a CAE-311 and CAE-314 Spacers to achieve the correct pinion outer mesh

All CAV45 Series Starters can be built by using our G/R-25 Kit A.

G/R-25 KitA consists of all Pinions, Mounting End Blocks, and various Spacers required.

CASE

Case Backhoe & Hyster Forklift **G/R-30/25MT**

Replaces Delco 25MT 1113157

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	43.5mm	2 Hole 144mm	24	4.5 Kw	91.95mm	14mm	L RHS

Cat, Case, International 453, Detroit, Cummins **G/R-30/DELCO**

Replaces Delco 28MT 1109149

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	39mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	88.8mm	10.6mm	L RHS

- Replaces Delco 28MT with 10T x 32mm Pinion

Case with Cummins "C" Series 8.3Ltr & 5.9 Ltr Engines **S/N 2338**

1994 - on

S/N 8814

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	12 & 24 advise	3.0 & 4.5	92mm	11mm	L RHS

Replaces Original 12T Pinion Starters

International 595/Case Tractor **G/R-30/INT**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	39.5mm	48mm	3 Hole 03/103/127mm	12	2.5 Kw	88.8mm	10.6mm	R LHS

- Replaces Lucas/Marelli M127 27508E with 10T x 32mm offset pinion

Case Backhoe with 188D Engine. 3.9 Ltr **SN-1726**

Note Original has flush Pinion - must check for step in Ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90	12	3.0 Kw	89	11.5mm	L RHS

CASE

Case Tractor 351, 845, 580C & 580D with 207D Engine **SN-1726**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90	12	3.0 KW	89mm	11.5mm	L RHS

Case Excavator 9020, 9020B, 1080 **SN-8643**

with W390 and W590 Engines 1985 - 04

also Suits Loader 621B with 6T590 Eng 1997 - 04

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48	3 Hole 127/90/90mm	24	5.5 Kw	89	11.5mm	RHS LHS

CATERPILLAR

Caterpillar **S/N-2278**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	24	4.5 Kw	92mm	17mm	L or R Advise

Caterpillar Tractor 45 & 75 Challenger **S/N-2263**
with 3116 Engine 1994 - on **S/N-8273**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	12 & 24	3.0 & 5.5 Kw	89mm	11mm	R LHS

Caterpillar Forklift **S/N-8267**
with Perkins 2032 Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	3 Hole 127/90/90mm	12	3.0 Kw	89mm	13	R LHS

• Replaces 37MT

Caterpillar Forklift S6E,K,F with 6DS Engine

Note Unable to use Gear Reduction Starter due to step in Ring gear.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	22mm	2 Hole 105mm	24	4.5Kw	82mm	11	R LHS

Caterpillar BackHoe 510D with 4045 Eng 1990-04 **S/N-30129**
Tractors 083, 008, with 6-466 Eng 1993-94

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	21mm	3 Hole 106,90,57	12	2.5Kw	74mm	11	R LHS

CHAMBERLAIN

Chamberlain Tractor

G/R-30/CH

Replaces Lucas M45G-26185E, 26148M

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10 or 11	40mm	27mm	3 Hole 03/103/146mm	12	3.0 Kw	92	12mm	R LHS

CHANGCHAI DIESEL

Changchai Diesel Stationary Engine

Suits 1cyl Models L18, L20, L18M, L20M

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	21mm	2 Hole 112mm	12	2.0 Kw	74.95mm	12.5mm	R LHS

CHEVROLET

Chevrolet V8 Diesel

G/R-01/6.2/6.5 Diesel

Staggered mount as on Hummer & Suburban 6.2 and 6.5 Diesel

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	9mm	2 Hole staggered 85mm	12	2.5Kw	82mm	10mm	R LHS

Replaces 28MT Delco.

Suitable for Wet Clutch

Chev/Oldsmobile Diesel

G/R-01/DIESEL

5.7l

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter
10	32mm	11.5mm	2 Hole 81.5mm	12	3Hp	N/A	3/8 "

CONTINENTAL

Continental 4cyl - 12V

G/R-59

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	36mm	27mm	2 Hole 107mm	12	1.6Kw	82.38mm	11mm	R N/A

Fitted to Towmotor ForkLifts and Stationary Engines etc.

CUMMINS

Cummins 4cyl BT Model

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	33.5mm	48mm	2 Hole 127mm	12	2.5 Kw	88.8mm	10.6mm	L RHS

Cummins B Series

Replaces Delco 28MT 12V

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	48mm	3 Hole 127/90/90mm	12	3.0 Kw	89	10mm	R LHS

Cat, Case, International 453, Detroit, Cummins

G/R-30/DELCO

Replaces Delco 28MT 1109149

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90	24	4.5 Kw	89	11	L RHS

Cat, Cummins Powered Case 120, 135, John Deere

Replaces Delco 37MT Starters

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	24	7.4 Kw	89	12	L or R

CUMMINS

Cat 950F, Cummins, in Case W30, W36

S/N-2531

Replaces Delco 37MT Starter

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	40mm	48mm	3 Hole 127/90/90mm	24	7.0Kw	89mm	10mm	L or R

Cummins, with CAV CA45D-24 Fitted

S/N-2338

Replaces CA45D-24 Starters

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	24	7.5 Kw	92mm	13	R LHS

Cummins 5.9Ltr 1993 - on

S/N-1397

As Fitted in Chrysler & Dodge Trucks

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90mm	12	3.0 Kw	89	13	R LHS

Cummins 5.9Ltr 6B 1994 - on

S/N-1739

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90mm	12	3.0 Kw	89	13	L RHS

Cummins 3.9Ltr 4B 1994 - on

S/N-8275

As Fitted to Dodge Ram Pick-up

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90mm	12	3.0 Kw	89	13	L RHS

CUMMINS

Cummins 8.3Ltr "C " Series Engines

S/N-2338

As Fitted to Dodge Ram Pick-up

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	24	4.5Kw	92mm	15	RHS LHS

DEUTZ-MITSUI

Deutz 4CYL (Chinese Copy)

Wombat Loaded

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22.5	3 Hole 146x103x103	24	3.5 Kw	92mm	11mm	RHS

Deutz

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	28mm	3 Hole 127/90/90mm	12	3.0 Kw	89	11mm	L RHS

Can be assembled from G/R-25/KitA

Deutz

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	28mm	3 Hole 127/90/90	24	4.5 Kw	89mm	11mm	L RHS

Can be assembled from G/R-25/KitA

Deutz KHD F6L413 & F6L714, 9.6 Ltr Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm		3 Hole 127/90/90mm	24	6.6 Kw	56mm		L RHS

SL5 type Cradle Mount Starter

Deutz Single Cylinder Air Cooled Diesel

G/R-63

F.I.L. 511 - 18 to 1 Compression

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	22mm	2 Hole 105mm	12	2,2Kw	82mm	13mm	RHS

Diamond T

Diamond T 1937 Super Mustang - 6cyl Sidevalve Engine **G/R-53**

6Cyl Sidevalve Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	50mm	3 Hole 90/90/127mm	12	1.9Kw	88.8mm	10.5mm	L RHS

Replaces original early Delco Remy

Diamond T **G/R-53A**

6Cyl Hercules Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	50mm	3 Hole 90/90/127mm	12	1.9Kw	88.8mm	10.5mm	L RHS

Replaces original early Auto-Lite

DODGE

313-318 V8

G/R-04/313V8

Suit AT-4 Dodge Truck

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	25mm	35mm	3 Hole 62/85/103mm	12	2.0 Kw	82.45mm	11mm	L RHS

Dodge Pick-up Cummins 5.9 Ltr 1993 - on RH mount

S/N-1397

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	47mm	3 Hole 127/90/90mm	12	3.0 Kw	89	12	R LHS

Dodge Pick-up Cummins 5.9 Ltr 1994 - on LH mount

S/N-1739

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	47mm	3 Hole 127/90/90mm	12	3.0 Kw	89	12	R LHS

DAEWOO

Daewoo Forklift

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	20mm	2 Hole 127mm	12	1.4 Kw	89mm	11mm	L RHS

Daewoo Industrial Engine 4BD1-3.3 Ltr

SN-1753

Also available in 24V S/N-17531

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 03/103/147mm	12	3.0 Kw	89mm	11.5mm	R LHS

DAIHATSU

Daihatsu B series, 10V, 11V, 13V, 17V 18V, & Delta V90 **S/N-0552**

Also suits Toyota Dyna 200, BU66, BU88

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	14mm	3 Hole 03/103/147mm	12	2.0 Kw	105mm	M14 x 1.5	R LHS

Daihatsu Delta DV26, F25, V20, V50 **S/N-8567**

Also suits Rocky DV57, DV58R

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35	22	2 Hole 117mm	12	2.0 Kw	82mm	13	R LHS

Similar starters are S/N-8401 and 8305

Daihatsu Delta V40, V42 3.4 Ltr 3B Engine 1982-85 **S/N-1100**

Also suits Rocky DV57, DV58R

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40	16	2 Hole 150mm	24	4.5 Kw	105mm	11	L RHS

FIAT

Fiat & UTB Tractor 33, 503, FL4C 5.2 Ltr 8065

Also suits some Ford New Holland

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	27mm	3 Hole 46/103/103mm	12	3.0 Kw	111mm	12mm	L RHS

Fiat & UTB 645B Grader, 80F13 Truck

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	27mm	3 Hole 46/103/103mm	24	4.5 Kw	110mm	12mm	L RHS

Fiat & UTB Truck 6.9Ltr 8360

Also suits Wheel Loader 645B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	27mm	3 Hole 46/103/103mm	24	4.5 Kw	110mm	12mm	R LHS

Fiat 190 Tractor

G/R-45/190

Also suits Truck 1978-85, Wheel Loader 1980-83 and Iveco Truck 1985-92

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	27mm	3 Hole 03/103/146mm	12	2.5Kw	109.8mm	13	R

Replaces Magnetti Marelli NT-68LC

Fiat 411R Tractor

G/R-4/12

Also suits 415R Tractor

G/R-45/24

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	12-24 Advise	4.5 Kw	82mm	12mm	L RHS

Fiat 190 & 450 Tractor

G/R-12/190

Replaces Fiat E100-1.5/12-VAR-1 or M25 Z9 1200G/MIN

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	28	2 Hole 114/76/79	12	2.5Kw	110	n/a	n/a

FREIGHTLINER

FREIGHTLINER With Detroit 60 Series Engines **R5OSGR-12**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	15	R LHS

* Note there maybe interference if fuel filters fitted inside frame rails

FORD

Ford D-Series Truck.

G/R-02/D-SERIES

Also suit 6000-7000 Tractors Clapper Style Starter

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	29	16	3 Hole 90/90/127mm	12	2.0 Kw	104	10	R LHS

- Replaces Lucas M127 27569D

Ford Cargo Truck

G/R-02/CARGO

1982 6cyl Diesel

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22mm	3 Hole 03/103/146mm	12	2.5 Kw	91.9mm	12.5mm	L RHS

- Replaces Bosch 0 001 359 110

Fordson Major Tractor 1950-58

G/R-30/CH

Replaces Lucas M45G-26133B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	28mm	3 Hole 127/90/90mm	12	2.5 Kw	92mm	12.5mm	R LHS

Fordson Major Tractor Lever Start

G/R-25/M45G

Replaces Lucas M45G-26072K Lever Start

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	28mm	3 Hole 127/90/90mm	12	2.5 Kw	92mm	12.5mm	R LHS

Ford 550 Industrial Tractor 3 cyl Diesel

G/R-30/M50

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	3 Hole 127/90/90mm	12	2.5 Kw	88mm	11mm	L RHS

- Replaces: Lucas 262110, 26227, 26265, 26291, 26812, 26316, 26329, 26338, 26339, 26341, 26343J

FORD

Ford Courier, Bravo, Econovan 2.5Ltr Diesel 1995-05

G/R-02/Courier

Replaces Mitsubishi M00787271

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	12	2.0 Kw	92mm	17mm	R LHS

Ford New Holland 2000,2600,3000,3500,4000,4100,4130,4630,4830,5000 5060,5600,5640,6000,6600,6640,6700,7000,7600,7700,7740,7810, 7840,8000,8240,8340,8600,9600,9700, also suits Case 995, 996.

Made from G/R-30/MFD with outer mesh adjustment

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	21mm	3 Hole 43/103/103mm	12	3.0 Kw	92mm	11mm	L or R Advise

Replaces Lucas M50 Type Starter

Ford Industrial and Marine Engines

Made from G/R-30/MFD with outer mesh adjustment

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	21mm	3 Hole 43/103/103mm	12	3.0Kw	92mm	11mm	R LHS

Ford Transit VF, VG Turbo

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	21mm	3 Hole 76/145/117mm	12	2.5Kw	92mm	11mm	L RHS

Ford, Mazda R2 RF

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	30mm	6mm	3 Hole 131/90/83mm	12	2.0Kw	88mm	13mm/ M10 x 1.5	L RHS

* Sample starter required.

FORD

Ford, Mazda T4100, E4100, Trader, E3500, T4000

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	39mm	27mm	3 Hole 145/95/115mm	24	4.5Kw	100mm	14mm	L RHS

- Sample Starter Motor required to establish Pinion off set.

Ford - CAV Replacement

G/R-25/CAV45G24

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	21mm	3 Hole 43/103/103mm	24	4.5 Kw	82mm	11mm	L or R Advise

- Replaces CA45 type starters

Ford/Mazda T3500/4000

Counter Clockwise

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	37mm	48mm	3 Hole 08/145/108mm	12	2.5 Kw	100mm	14mm	R LHS

Ford Tractor S4E Engine, FD20, FD25, FD28, FD30.

Note Unable to use Gear reduction Starter due to stepped ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	22mm	2 Hole 105mm	12	2.5Kw	82mm	11mm	L RHS

Ford, Mazda R2

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	30mm	6mm	3 Hole 131/90/83mm	12	2.5 Kw	88mm	13mm/ M10 x 1.5	L RHS

GM DIESEL

GM-6V53 and some 6/71s

S/N-18570

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	48mm	3 Hole 27/127/127mm	12	3.3hp	92mm	17mm	L or R Advise

- Replaces 30MT. Oil sealed

GM-60 Series Engines

R5OSGR-12v

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	17mm	L or R Advise

- Replaces 30MT. Oil sealed

GEHL

Gehl Grader MG747B with Isuzu Engine 84-92 **S/N-0903**
Skid steer SL 4625SX with 2.2Ltr 92-on

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	26mm	2 Hole 105mm	12	2.0Kw	82mm	11	R LHS

- Also available a 11Tooth Pinion version S/N - 2474

HATZ

Hatz 2L30, 3L30, V108

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	21mm	2 Hole 105mm	12	3.3hp	82mm	13mm	R LHS

Note: We require sample starter to establish Pinion off set.

HERCULES

Hercules Forklift

Fitted with Continental Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	21mm	3 Hole 127/90/90mm	12	1.4 Kw	88.8mm	11mm	R LHS

HINO

Hino Truck Dutron U424 2003

G/R-49

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	30mm	2 Hole 141.5mm	24	4.5Kw	104.8mm	16mm	R LHS

Hino EM100, EK200, EF300,EF700,EF500,EF550,EL 100,EP100

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	47mm	43mm	3 Hole 78/165/119mm	24	4.5Kw	122mm	15mm	L RHS

• Sample starter motor required ref DK 31001

Hino FD16, WB501, FC, KM1986-94

SN-2108

W04C/D, W06, W06D, & 1W Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	31mm	2 Hole 106/119/153mm	24	4.5Kw	105mm	15mm	R LHS

Also available in 12 volt S/N-8407

Hino EK100

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	47mm	43mm	3 Hole 16/178/165mm	24	4.5 Kw	122mm	15mm	R LHS

• Sample starter motor required

Hino EH300, 700, H06C, H07D,GD, KL, KQ, RM, RB

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	28mm	3 Hole 40/120/107mm	24	4.5Kw	100mm	13mm	L RHS

• Sample starter motor required

HYUNDAI

Hyundai Wheel Loader HL757-7

SN-2499

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	2 Hole 127mm	24	4.5Kw	89mm	11	R LHS

HITACHI

Hitachi Excavator EX300 with 28.5Ltr Engine 6SDIT

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	57mm	3 Hole 78/165/119mm	24	5.5Kw	105mm	15	L RHS

Hitachi Excavator EX200, 203, 205, 212.

S/N-2105

with 5.8Ltr 6BGI 86 - on

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 35/110/110mm	24	4.5Kw	105mm	15mm	R LHS

- Replaces 40MT

HYSTER

Case Backhoe & Hyster Forklift

G/R-30/25MT

Replaces Delco 25MT 1113157

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	43.5mm	2 Hole 144mm	24	4.5 Kw	91.95mm	14mm	L RHS

Hyster Forklift 4.3 Ltr V6 1996 - on

S/N-2203

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	2 Hole 127mm	12	2.0Kw	88mm	11mm	L RHS

Hyster H40, H50, S100, S125, S150

S/N-2925

with 4-236 and 4-203 Engines 1969-1985

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	12	3.0Kw	89mm	10mm	L RHS

Can be assembled from G/R-25 Kit A

Hyster H150, H275, H35D, H350B

S/N-8269

with B354 and P6-354 Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90	12	2.5 Kw	89mm	10mm	R LHS

- Replaces 28MT

Can be assembled from G/R-25 KitA

INTERNATIONAL

Cat, Case, International 453, Detroit, Cummins

G/R-30/DELCO

Replaces Delco 28MT 1109149

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	88.8mm	10.6mm	L RHS

- Replaces Delco 28MT with 10T x 32mm Pinion

International 595/Case Tractor

G/R-30/INT595

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	39.5mm	48mm	3 Hole 03/103/127mm	12	2.5 Kw	88.8mm	10.6mm	R LHS

- Replaces Lucas/Marelli M127 27508E with 10T x 32mm offset pinion

International D3 A/B Truck

G/R-15/D3

Replaces Lucas M45G 26103F

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40.7mm	22.5mm	2 Hole 108mm	12	2.0 Kw	82.5mm	1/2"	L RHS

International 345 V8 ENGINE

G/R-15/345

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	25mm	40mm	2 Hole 104.4mm	12	2.0Kw	93.95mm	11mm	R LHS

International Scout 4x4 & Pick-up

G/R-15/SCOUT

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	25mm	40mm	2 Hole 104.4mm	12	2.0Kw	93.95mm	11mm	R LHS

INTERNATIONAL

International 392 V8 ENGINE

G/R-15/392

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	25mm	56mm	2 Hole 105mm	12	2.5Hp	82.5mm	1/2"	R LHS

International with Cummins 5.9 Ltr

S/N-2666

S/N-8814

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	12	3.0Kw	92mm	13mm	R LHS

International

G/R-25/CAV45D24+12V

Replaces CA45 D

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	48mm	3 Hole 27/127/127mm	24	4.5Kw	88.8mm	11mm	L or R Advise

Can be assembled from G/R-25 KitA

International Tractor

G/R-25M45G

Replaces Lucas M45G 26193D

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	48mm	3 Hole 127/127/127	12	3.0Kw	92mm	17mm	L or R Advise

Can be assembled from G/R-25 KitA

International A554 4Cyl Tractor

G/R-30/INT/A554

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	48mm	3 Hole 127/90/90	12	2.5Kw	88mm	11mm	L or R Advise

Replaces CAV 45D12-14 and CAV-SME 4812-1 Serial No. EZ 215

Replaces Also IH 704498R9I

Note: This starter can be supplied in Clockwise and Counter Clockwise rotation *Ask Customer*

INTERNATIONAL

International Excavator with 4LCI Engine

S/N-1193

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	21mm	2 Hole 120mm	12	2.0Kw	95mm	11mm	L or R Advise

International with Cummins ISM Engines 1998 - 06

S/N-19501

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	5.0Kw	92mm	12mm	L or R R

International, Perkins in ACCO 1820 1975 - on

S/N-8267

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	3 Hole 127/90/90mm	12	3.0Kw	88.8mm	13mm	R LHS

International Loader fitted with a KOMATSU 6cyl Engine G/R-30/INT-LOADER

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	20mm	2Hole 145mm	24V	4.5Kw	95mm	12.5mm	RHS

- Replaces Nikko 0-21000-4830 Starter
- Wet Clutch Drive

ISEKI

Iseki 9000 Tractor and T6COE

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	55mm	3 Hole 35/110/110mm	12	3.0Kw	105mm	13mm	L RHS

- Sample starter motor required

ISUZU

Holden Rodeo, Isuzu C190 & C240 & KB Series **S/N-1193**
Forklift TCM-(Fork O Matic) 4Cyl Isuzu Diesel **S/N-1193A**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	21mm	2 Hole 120mm	12	2.0Kw	95mm	13mm	L

Note: S/N-1193A ForkLift TCM has 36mm pinion

Isuzu 6BB1, 6BD1, & FSSIZ **S/N-2108**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 10/135/110mm	24	4.5 Kw	105mm	13mm	R LHS

Isuzu FSR 650, FRR, FSR, FTR **S/N-8928L**
with 16.0 Ltr and 28.5 Ltr Engines 1996 - 02 **S/N-1245R**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	57mm	2 Hole 175mm	24	5.5Kw	175mm	15mm	L or R Advise

Isuzu 6HE1 Engines in FFR33, FTS33, FFR32, FSR32, **S/N-25221**
FFR500, 550 with 6HHI Engine 8.2Ltr & 7.1 Ltr

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	44mm	2 Hole 150mm	12	5.0 Kw	105mm	14mm	R L

Isuzu 4BD1, 6BD1, JCR500, JCR550

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 35/110/110mm	12	2.5 Kw	105mm	13mm	R LHS

Sample Starter required to establish off set

ISUZU

Isuzu 4HF1,4HG1,4HF1, WPR400, NPR300, NKR66

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	45mm	2 Hole 170mm	24	4.5 Kw	94mm	15mm	L RHS

Isuzu 4BD1, 6BD1, Landrover 4BA1 Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 35/110/110mm	12	2.5 Kw	105mm	13mm	L RHS

- Sample starter required to establish the off set

Isuzu 4BD1, 6BD1

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 135/110/110	24	4.5 Kw	105mm	13mm	L RHS

- Sample starter motor required

Isuzu 4BB1 - 350ELF

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	20mm	2 Hole 120mm	24	4.5 Kw	95mm	13mm	L RHS

Isuzu E120

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	48mm	55mm	3 Hole 55/169/138mm	24	7.7 Kw	122	15	R

R5OSGR Series may suit this application

- Sample starter required to establish off set

ISUZU

Isuzu Jackaroo Turbo 3.0Ltr UEBS55 2.8 Ltr **S/N-2099**
& 4JK1,4JB1-T engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	10mm	2 Hole 120mm	12	2.0 Kw	95mm	11mm	R LHS

• Sample starter required to establish off set

Isuzu 6BB1, 6BD1

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 10/135/110mm	24	4.5 Kw	105mm	13mm	L RHS

Isuzu, Komatsu FD25 and Isuzu KB with C190 Engine **S/N-1193**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	21mm	2 Hole 120mm	12	2.0 Kw	95mm	15mm	L

Note: The Middle Hole is not a mounting Hole

Isuzu, FFS12, 5.8Ltr 6BG1 Engine **S/N-2105**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 35/110/110mm	24	4.5 Kw	105mm	12mm	R LHS

ISUZU

Isuzu 4BA1, JCR500 with 5.8Ltr 6BD1 Engine 1976-84 **SN-1753**

As used in Landrover

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	2 Hole 103mm	12	2.5 Kw	89mm	11.5mm	R LHS

* Also available in 24 Volts S/N-17531

Isuzu NQR 450 Turbo

CCW Rotation

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	43mm	2 Hole 162.75mm	12 & 24	2.5 & 4.5Kw	94	16	L RHS

Isuzu JACKAROO UBS521 2.2Ltr C233T 1982-88 **S/N-1193**

Also suits RODEO KBD 2.0Ltr C190 1983_88

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	21mm	2 Hole 120mm	12	2.0Kw	95mm	11mm	L RHS

Isuzu JACKAROO UBS17 2.6 Ltr 4ZEi 1988-93. **S/N-1745**

Also suits RODEO TFR17, 2.6 Ltr 4ZEI 1988-98

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	22mm	2 Hole 128mm	12	1.4Kw	89mm	11mm	R LHS

JOHN DEERE

John Deere 2010 & 2030 4cyl Diesel

G/R-30/JD

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	4.5mm	2 Hole 105mm	12	2.0Kw	N/A	10mm	R LHS

John Deere with Cat 950F

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	48mm	3 Hole 27/127/127mm	24	4.5 Kw	89mm	10mm	L&R Advise

John Deere 4Cyl - 315C Diesel

G/R-30/JD-A-24V

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	35mm	2 Hole 105mm	24	2.0Kw	82mm	11mm	R LHS

John Deere 644D, 644E, 644G, 1982-04

S/N-30129

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	12	3.0Kw	89mm	11mm	L RHS

John Deere Positrak - Bobcat

G/R-30/JD-B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	25mm	2 Hole 105mm	12	2.0Kw	82mm	11mm	

- Replaces RXS413 OEX

JOHN DEERE

John Deere

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	24	4.5Kw	89mm	11mm	L RHS

Can be assembled from G/R-25 24V KitA

John Deere 4039

S/N -1750

S/N-17501

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40.5mm	29mm	2 Hole 116mm	12 & 24	2.5 & 4.5 Kw	115mm	12.5mm	L & R Advise

• Use SN-1750 for 12v, SN-17501 for 24v

John Deere 8200, 8200T, 8300, 8300T, 8400, 8400T.

S/N-18566

with W-6-466 Engines 1996 - 04

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40	48mm	3 Hole 127/90/90mm	12	3.0Kw	89mm	12.5mm	R LHS

Also available in 10Tooth Spec

John Deere 315C

G/R-30/JD-A-12V

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	36mm	2 Hole 105mm	12	2.0Kw	82.5	11mm	L & R Advise

• Replaces Bosch 0001359090

KATO

Kato, Mitsubishi Excavator HD550 with 6D31 Eng **S/N-25233**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	20mm	2 Hole 145mm	24	4.5Kw	100mm	13mm	L&R Advise

KENWORTH

Kenworth with Cummins VT300. **S/N-18570**
and 716 Detroit Engines 1963-84

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	56mm	48mm	3 Hole 27/127/127mm	12	5.0Kw	92mm	13mm	L&R Advise

Kenworth with Cummins ISX Engines **R505GR-12**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	13mm	L&R Advise

Kenworth with Cat C15 14.6Ltr Engine 2000 - 06 **R505GR-12**
and some Detroit 60 Series Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	13mm	L&R Advise

Kenworth with Cat C15 14.6Ltr Engine 2000 - 06 **R505GR-24**
and some Detroit 60 Series Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	24	4.5Kw	92mm	13mm	L&R Advise

KOBELCO

Kobelco 6DR5

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	22mm	2 Hole 145mm	24	4.5 Kw	100mm	12mm	L RHS

Require sample starter to establish Off set

Kobelco YM5000, YM6000

S/N-2705

Replaces 3 Hole Mounting

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
15	44mm	23mm	3 Hole 120 /? / ?	12	2.0Kw	95mm	12mm	L RHS

Kobelco Excavator HD550 with 6D31 Eng

S/N-25233

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	20mm	2 Hole 145mm	24	4.5Kw	100mm	12mm	L RHS

KOMATSU

Komatsu 4D94-2 Dozer

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22mm	2 Hole 124mm	24	4.5 Kw	94.9mm	13mm	L RHS

Komatsu S6D125/140/170

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	48mm	3 Hole 27/127/127mm	24	4.5Kw	122mm	15mm	L & R Advise

Komatsu SA6D170A

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	56mm	48mm	3 Hole 27/127/127mm	24	7.5 Kw	92mm	17mm	R LHS

Komatsu 6D95L

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	16mm	3 Hole 27/127/127mm	24	4.5 Kw	105mm	13mm	L RHS

Komatsu Forklift 4D 4Cyl Petrol

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	35mm	3 Hole 27/127/127mm	12	1.4Kw	82	11mm	R LHS

KOMATSU

Komatsu FD40 FD50 with FD52 Engines

S/N-8527

Suits also Fords FD20 and FD25

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	22mm	2 Hole 150mm	24	4.5 Kw	82mm	11mm	L RHS

Komatsu 6D105

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46mm	40mm	3 Hole 36/111/111mm	24	4.5Kw	105mm	13mm	L RHS

Sample starter required to establish off set

Reference R5OSG Series

Komatsu PC160 to PC220 (6D105)

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46mm	51mm	3 Hole 36/119/119mm	24	7.5 Kw	100mm	13mm	L RHS

Sample starter required to establish off set

Reference R5OSGR Series

Komatsu, Bobcat

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35	21mm	2 Hole 120mm	24	4.5 Kw	95mm	12mm	L RHS

Isuzu, Komatsu FD25

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	21mm	2 Hole 120mm	12	2.5 Kw	95mm	11mm	L RHS

KOMATSU

Komatsu CRA TWS-TX with DA640 Engine

S/N-2105

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	41mm	3 Hole 35/110/110mm	24	4.5Kw	105mm	13	L RHS

Komatsu Forklift FG14 4cyl Petrol

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	23mm	2 Hole 130mm	12	1.4 Kw	70	13	L RHS

Komatsu Dozer with Cummins 6B 5.9 Ltr Engine

S/N-8275

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	2 Hole 127mm	12	3.0 Kw	89mm	13	R LHS

Komatsu Dozer D50, D53, with 4D105 Engine

S/N-17451

also Excavator PC200 with 6D105 Engine

also Forklift FD250, FD280, with 6D15 Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46mm	52mm	3 Hole 36/119/119mm	24	5.5 Kw	100mm	13	L RHS

Komatsu Forklift with Cummins 6D102E Engine

S/N-2499

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	2 Hole 127mm	24	4.5 Kw	89mm	13	R LHS

KOMATSU

Komatsu Forklift FD25-11 4cyl 4D95SW1 Engine

G/R-54

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	35mm	2 Hole 105mm	12	2.5Kw	82	11mm	R LHS

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch

KUBOTA

Kubota V1902, D1502, V1505, V1902B 1980-94 **G/R-52A**

Carrier Engines - D1402, V1501, C749 & Tractor Engines V3300, V3300E, V3800 DI

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	25mm	2 Hole 105mm	12	3.6Kw	82.5mm	11mm	R LHS

Kubota **G/R-52B**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	42mm	25mm	2 Hole 105mm	12	1.4Kw	82mm	12mm	RHS

Kubota S2200 & S2800 1992 - on **SN-1750 12V**
SN-17501 24V

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting Side
11	40.5mm	29mm	2 Hole 115mm	12 & 24 Advise	3.3hp	115mm	12.5mm	L & R Advise

• Use SN-1750 for 12v, SN-17501 for 24v

Kubota 2T600, WZ600C 1981 - on **S/N-2656**
B1600, B1702 with D950 Eng 1981 - on
W905E 1993 - on

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	26mm	25mm	2 Hole 105mm	12	2.0 Kw	82mm	10mm	L RHS

Kubota G2500H 3cyl Diesel Tractor/Mower **G/R-52**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	19mm	2 Hole 110mm	12	1.9Kw	66mm	9mm	R RHS

LISTER

Lister Stationary Engine CCW Rotation **G/R-61**

Suits 7.5hp Single Cylinder Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	28mm	3 Hole 114/80/80mm	12	1.4 Kw	88.8mm	11mm	R LHS

Lister Twin **G/R-61A**

Replaces Lucas 25327B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32	28mm	3 Hole 114/80/80mm	12	1.4 Kw	89mm	11.5mm	R LHS

Lister Stationary Engine **G/R-61B**

Replaces M35K 25196E

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46mm	49mm	2 Hole 127mm	12V	4.5Kw	88.8mm	11mm	

• Counter Clock Wise Rotation

Lister JK 6Cyl 1970 **G/R-25/Lister**

Replaces CAV BS624K128

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46	48mm	3 Hole 46/103/103mm	24	4.5Kw	98	12mm	R LHS

LEYLAND

Leyland Tractor 154 4cyl Diesel

G/R-30/MFD

Replaces Lucas M45G-26288E

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	27mm	3 Hole 46/103/103mm	12	2.5 Kw	92	Slotted	R LHS

Leyland Tractor 4cyl Diesel

G/R-30/M50

Replaces Lucas M45G-26252B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	27mm	3 Hole 46/103/103mm	12	2.5 Kw	92	Slotted	R LHS

Leyland Bus 1971 6cyl 460 Diesel

G/R-25/BS5

Replaces Lucas M45G-26252B

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 27/127/127mm	24	4.5kw	92mm	11mm	R LHS

LOMBARDINI

Lombardini Stationary Engine CCW Rotation

G/R-21

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	28mm	2 Hole 105mm	12	1.4 Kw	76mm	11mm	R LHS

• Counter clock-wise rotation

Lombardini, Same, Steyr

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	21mm	2 Hole 105mm	12	2.5 Kw	82mm	13mm	R LHS

Lombardini, 6LD 0.4 Ltr Petrol

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	27mm	2 Hole 105mm	12	1.4 Kw	76mm	11mm	R LHS

Lombardini with 0.6 Ltr Diesel Engine

Also suits LD705, LD820, L14 with 0.7 & 0.8Ltr Engines

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	12	2.5 Kw	82mm	11mm	L RHS

Lombardini 672 with 1.4 Ltr Diesel Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	12	2.5 Kw	82mm	11mm	R LHS

MAN

MAN

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting Side
10	38mm	28mm	3 Hole 127/90/90mm	24	4.5Kw	89mm	11mm	L

MACK

Mack, Renault

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	11mm	L

Mack, E7 1994-96

S/N-19502R

S/N-19503L

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	5.0 Kw	92mm	12mm	R

MAPRO LOADER

Mapro Loader with Perkins 4-154 Diesel

G/R-25/ACCO

Replaces Lucas M127-27518K

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	26mm	3 Hole 127/90/90mm	12	2.5Kw	89mm	11mm	L

MAZDA

Ford, Mazda R2

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	30mm	6mm	3 Hole 131/90/83mm	12	2.5 Kw	88mm	13mm/ M10 x 1.5	L RHS

Ford, Mazda R2 RF

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	30mm	6mm	3 Hole 131/90/83mm	12	2.5 Kw	88mm	13mm/ M10 x 1.5	L RHS

Ford, Mazda T4100

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	30mm	3 Hole 145/115/95mm	24	4.5Kw	100mm	14mm	L RHS

- Sample Starter Motor required to establish pinion off set

Mazda T3500/4000, Ford

Counter Clockwise

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	37mm	48mm	3 Hole 08/145/108mm	12	2.5 Kw	100mm	14mm	R LHS

Mazda E2500, E3000, E3500

Counter Clockwise

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	48mm	3 Hole 08/145/111mm	24	4.5 Kw	100mm	13mm	R LHS

MAZDA

Mazda B2200

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	40mm	41mm	3 Hole 85/134/80mm	12	2.5 Kw	90mm	13mm/ M10 x 1.25	R LHS

Mazda ZB

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	22mm	3 Hole 45/105/105mm	24	4.5 Kw	100mm	13mm	L RHS

- Sample Starter Motor required

MASSEY FERGUSON

Massey Ferguson Grey

G/R-30/MFG

4cyl Petrol & Kero

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	29mm	2 Hole 105mm	12	1.4 Kw	72.6mm	11.5mm	R LHS

• Also suits Vanguard 1949-56, early Triumph TR2 & TR3 and Mayflower

Massey Ferguson Diesel

G/R-30/MFD

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	27mm	3 Hole 46/103/103mm	12	2.0 Kw	88.8mm	12mm	R LHS

• Replaces Lucas M45G-26264E, 26259, 26271, 26279, 26281, 26283, 26288, 26364, 27432 and 26154N

Massey Ferguson 35 Series

G/R-30/MF35

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	29mm	28mm	2 Hole 127mm	12	1.4 Kw	88.8mm	12.5mm	R LHS

• Replaces Lucas M35G 25038

Massey Ferguson MF210 - 3Cyl Diesel

G/R-30/MF210

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	6mm	2 Hole 110mm	12	2.0 kw	82.2mm	11mm	R LHS

• Replaces Hitachi S12-61

Massey Ferguson MF3115 with 6/920 Eng 1990-on

S/N-8267

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	3 Hole 127/90/90mm	12	3.0 Kw	89mm	13mm	R LHS

MERCEDES

Mercedes

2 hole mount

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	24	4.5 Kw	89mm	11mm	R LHS

Mercedes

3 hole mount

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	11mm	R LHS

mitsubishi

Mitsubishi Forklift

Replaces Mitsubishi M001T79781

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	17mm	2 Hole 105mm	12	1.4Kw	85mm	11mm	R LHS

Mitsubishi Canter 4DR7

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	35mm	17mm	2 Hole 145mm	12	2.5 Kw	82mm	12mm	L RHS

Mitsubishi Triton, Pajero 4D56

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	32mm	3mm	2 Hole 105mm	12	2.5 Kw	77mm	M10 x 1.25	R LHS

Mitsubishi Canter 4D30 4DR5

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	17mm	2 Hole 145mm	24	4.5 Kw	60mm	13mm	L RHS

- Requires re-location of starter solenoid relay if using a Gear reduction starter.

Mitsubishi FD30, FD50, FD70 with S4E & S6E Eng 1985-96

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	22mm	2 Hole 105mm	24	4.5 Kw	82mm	11mm	R LHS

MITSUBISHI

Mitsubishi Fuso 6D10,6D15 Engines in FM, FK

S/N-8574

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	66mm	2 Hole 150mm	24	4.5 Kw	110mm	13mm	R LHS

Mitsubishi 8DC

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	56mm	58mm	3 Hole 36/119/119mm	24	7.0 Kw	100mm	13mm	L RHS

- Requires some alteration to solenoid

Mitsubishi 6D22

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting Side
13	55mm	69mm	3 Hole 09/133/149mm	24	7.3hp	100mm	15mm	R

Mitsubishi Kato & Fuso FH100, FK330 with 6D31 IAT Eng

S/N-25233

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	20mm	2 Hole 145mm	24	4.5 Kw	100mm	13mm	L RHS

Mitsubishi FD20, FD22, FD23, FD25 with S4E & Eng 1985-96

Note: Unable to use Gear Reduction Starter - due to stepped Ring gear clearance

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	22mm	2 Hole 105mm	24	4.5 Kw	82mm	11mm	R LHS

NISSAN

Nissan Forklift

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	9mm	2 Hole 110mm	12	1.4 Kw	82.3mm	11mm	R LHS

Nissan UD

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	40mm	3 Hole 33/115/115mm	24	4.5 Kw	105mm	13mm	L RHS

- Sample Starter Motor required

UD Nissan ND6 NE6 N69

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	35mm	3 Hole 32/115/115mm	24	4.5 Kw	105mm	13mm	L RHS

UD Nissan RD8

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	48mm	40mm	3 Hole 13/135/156mm	24	7.5 Kw	122mm	15mm	R LHS

NISSAN

Nissan ED33 & some 33-12 V

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	12mm	3 Hole 82/97/137mm	12	2.5 Kw	105mm	13mm	L RHS

Nissan TB SERIES

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	11mm	2 Hole 110mm	12	1.6 Kw	82mm	10mm	L RHS

Also suit Patrol 4.2, 4.5 and 4.8 petrol

Nissan Patrol TD42

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	10mm	3 Hole 80/140/114mm	12	2.5 Kw	105mm	13mm	L RHS

Nissan Navara TD25 - TD27

Note: Unable to use Gear Reduction Starter

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	12mm	2 Hole 135mm	12	2.5 Kw	82.4mm	11mm	L RHS

Also suit 2.5 and 2.7Lt Diesel

Nissan Forklift FD40, FD50 with 4D52 Engine

S/N-8527

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	16mm	2 Hole 150mm	24	4.5 Kw	105mm	11mm	L RHS

NISSAN

Nissan Forklift A15 and E20,23 Urvan Engine ***G/R-24/L-SERIES***

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	13.5mm	2 Hole 110mm	12	1.4Kw	69.9mm	11mm	R LHS

NISSAN SD & ED 4cyl SERIES ***G/R-24/SD 4CYL SERIES***

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	10mm	2 Hole 110mm	12 & 24	2.0kw	82mm	10mm	R LHS

suits: Nissan 720, Navara and Forklifts with SD22-23-25 engines

ONAN

Onan

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	34mm	2 Hole 105mm	12	3.3hp	82mm	13mm	R LHS

PERKINS

Perkins-CAV45

G/R-25/CAV45D

Replacement for some Acco 1820 engines, Muirhill Tractors & Cranes and Perkins 6/354 6 cyl Diesels

G/R-25/CAV45D24

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	18mm	3 Hole 90/90/127mm	12 & 24v advise	3.0 & 4.5 Kw	88.9mm	13mm	R LHS

Perkins-CAV45

G/R-25/CAVFORD

Replacement for CA45F with Ford mounting

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	21mm	3 Hole 103,103,146	12 & 24v advise	3.0 & 4.5 Kw	88.9mm	13mm	R LHS

Perkins 210 T.I. Acco 1850E

G/R-25/ACCO

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	30mm	3 Hole 90/90/127mm	12	3.0 Kw	88.8mm	10.5mm	R LHS

- Replaces Lucas M127, M50 and CAE 45

Perkins 4cyl

G/R-25/M45G

Replacement Lucas M45G 25131A, 26140A, 26190A, 26364A, 26249A

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	46mm	See Notes	3 Hole 90/90/127mm	12	3.0 Kw	91.8mm	11.5mm	L RHS

Pinion at rest measurement for: Lucas 26131A = 26mm Lucas 26364A = 22mm

Lucas 26140A = 20mm Lucas 26249A = 26mm - Lucas 26190A = 28mm.

- Check pinion at rest measurement when ordering

Perkins

G/R-25/M50G

Replacement for Lucas M50G-26357

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	29mm	90/90/127mm	12	3.0 Kw	88.8mm	10.5mm	LHS

Also suits Perkins 3 cyl Gen set using factor spacer to give correct outer mesh.

PERKINS

Perkins M540 V8 **G/R-25/540-V8**

Replacement for Lucas 3M127-27301D and some Muir Hill Tractors & Cranes

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	Advise	3 Hole 03/103/146mm	24	4.5 Kw	check 92mm	16.6mm	L or R Advise

Note: Check spigot size as there are differences

Perkins-CAV 6354 **G/R-25/6354**

Replaces Lucas M127

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 90/90/127mm	12 or 24	2.5 or 4.5Kw	88.8mm	10.5mm	L or R Advise

Terex Backhoe

Replaces Perkins 2873K404

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	29mm	3 Hole 90/90/127mm	12	3.0 Kw	88.8mm	11mm	L or R Advise

Perkins 3cyl Diesel Gen Set **G/R-30/M50G**

Replaces Lucas M50 Starter

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	29mm	3 Hole 90/90/127mm	24	4.5Kw	89mm	11mm	L or R Advise

PERKINS

Perkins

G/R-25/SL5

Replaces CAV-SL5

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 90/90/127mm	24	4.5 Kw	89mm	11mm	L & R Advise

Perkins

G/R-25/CAV45F24

Replaces CA45F

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 90/90/127mm	24	5.0 Kw	89mm	11mm	L & R Advise

Perkins 1cyl Generators & Fire Pumps

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	34mm	20mm	2 Hole 110mm	12	1.9hp	74mm	13mm	L & R Advise

Peterbilt

Peterbilt with Cummins ISX Engines 1999 - 06 **S/N-19505**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48	3 Hole 27/127/127mm	12	5.0 Kw	92mm	13mm	L & R Advise

Peterbilt with Cummins NH, NR, NT Series Engines **S/N-18570**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	56mm	48	3 Hole 27/127/127mm	12	5.0 Kw	92mm	13mm	L & R Advise

* Replaces Delco MT38, MT40, MT42.

RENAULT

Renault

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	46mm	40mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	13mm	L RHS

Mack, Renault

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	22mm	3 Hole 127/90/90mm	24	4.5Kw	89mm	13mm	L RHS

RHINO

Rhino Tractor - Chinese

G/R-30/RHINO

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	20mm	2 Hole 112mm	12	2.5 Kw	74.9mm	13mm	L RHS

ROBIN

Robin 1cyl Diesel Pump Engine Series DY27Y

Replaces Hitachi Starter

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	16.5mm	2 Hole 52.25mm	12	1.4 Kw	62mm	11mm	L or R Advise

RUGGERINI

Ruggerini Stationary Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	30mm	2 Hole 105mm	12	1.4 Kw	76.2mm	11mm	L or R Advise

Ruggerini

Counter Clockwise

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	12	2.0 Kw	82mm	13mm	L or R Advise

Ruggerini

Counter Clockwise

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	24	4.5 Kw	82mm	13mm	L or R Advise

SAME

Lombardini, Same, Steyr

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	21mm	2 Hole 105mm	12	2.5 Kw	82mm	13mm	L RHS

Same, Steyr

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	3 Hole 127/90/90	12	2.0 Kw	82mm	13mm	L RHS

Same Tractor Frutterd MKII 85

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	24mm	2 Hole 105mm	12	2.5 Kw	82.4mm	13mm	L RHS

SAMSUNG

Samsung

Replaces 37MT

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	10mm	R LHS

* Can be assembled from G/R-25/KitA

SCANIA

Scania

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	11mm	L RHS

* Can be assembled from G/R-25/ KitA

STEYR

Steyr

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	3 Hole 105mm	12	2.5 Kw	82mm	12mm	R LHS

STERLING

Sterling with Cummins M11 Engine 1994 - 98

RSO5GR-12

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	12mm	R LHS

SISU DIESEL

Sisu Diesel

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	41mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	11mm	L RHS

THERMO KING

Thermo King

S/N-1193

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	32mm	21mm	2 Hole 120mm	12	2.0 Kw	95mm	11mm	L & R Advise

* For RHS application manufacture from S/N-1060

Thermo King 2QM20 Engine

S/N-2705

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
15	44mm	23mm	2 Hole 120mm	12	2.0 Kw	95mm	13mm	L RHS

Thermo King

S/N-0903

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	26mm	2 Hole 105mm	12	2.0 Kw	82mm	11	R LHS

TOYOTA

Toyota 3.6Ltr H Engine 1972 - 81 **S/N-8336**

Dyna HU15, HU30
Forklift 3FD35, 3FD45

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	15mm	2 Hole 138mm	24	4.5 Kw	105mm	12mm	R LHS

Toyota HJ Landcruiser 12T 1990 - 96 **G/R-29/HJ**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	40mm	20mm	2 Hole 142.5mm	12	2.5 Kw	91mm	13mm	R LHS

Toyota HJ Landcruiser 13T **G/R-29/HJ13T**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
13	40mm	20mm	2 Hole 115mm	12	2.5 Kw	82.5mm	12.5mm	R LHS

Toyota 1HZ Lan Cruiser 4.2Ltr 1990 - 2004 **S/N-2160**

HZB40, HZB50.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	45mm	15mm	2 Hole 142mm	12 or 24 Advise	2.5/4.5 Kw	90mm	13mm	L RHS

* Note: For 24 volt application order S/N - 21601

Toyota 2H Coaster 4.0 Ltr 1982 - 84 and **S/N-21061**

Landcruiser HJ 60, HJ 75, HJ47

Also FDC35, FDC45, 1980 - on and Dyna HU40, HU50, 1984 -92

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	16mm	2 Hole 142mm	12 or 24v Advise	4.5 Kw		13mm	R LHS

* Note:- For 12 volt applications order S/N-2160.

TOYOTA

Toyota Dyna 3B, BU60, 1985-89 **S/N-0552**

Also Landcruiser BJ42 3.4 Ltr 1981-84

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	14mm	2 Hole 146mm	12	3.0 Kw	105mm	15mm/ M12 x 1.5	L RHS

Toyota Coaster, Dyna BU36, BU85 with 3.2 Ltr 2B, 3.4 3B **S/N-2104**

and 13B Engines 1978 - 88

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	14mm	2 Hole 146mm	24	4.5 Kw	105mm	15mm/ M14 x 1.5	L RHS

Toyota Forklift 2D 2.0Ltr DA12, DA115, FD100, FD150, **S/N-8317**

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	56mm	3 Hole 135/111/111	24	4.5 Kw	105mm	13mm	L RHS

- Sample Starter Motor required

Toyota Dyna WU90 with 4.0 Ltr 1W Engine **S/N-8407**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	56mm	2 Hole 153mm	24	4.5 Kw	105mm	13mm	L RHS

TOYOTA

Toyota Forklift FD10/14/15/20 with 2J 3.0 ltr Eng S/N-1097
also 6FD20, 6FD14 with 1DZ Engine

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	16mm	2 Hole 113mm	12	2.5 Kw	90mm	13mm	R LHS

• Sample Starter Motor required

Toyota Forklift JY30 with 3.0 Ltr 2J Engine S/N-1750

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	29mm	2 Hole 116mm	12 or 24v Advise	2.5 or 4.5 Kw	82mm	13mm	R LHS

Note: - For 24 volt order S/N- 17501

Toyota Forklift FD70, FD72, FDT25, FD30 & Dyna BU20 B 2J S/N-1754
with B2J 3.0 Ltr Engines Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	16mm	2 Hole 113mm	24	4.5 Kw	90mm	13mm	L RHS

Toyota 14B, 15B, Delta V119, Dyna BU212R, 200, BU66, BU88 S/N-2265

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	14mm	2 Hole 147mm	12	2.5Kw	105mm	13mm	R LHS

Toyota Hi Lux & 4Runner RN130R, RN105R w/2.4 Ltr 22R Eng. S/N-1024
Forklift 5FGL10, 5FGL14

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	35mm	29mm	2 Hole 116mm	24	4.5 Kw	82mm	13mm	R LHS

UNIVERSAL

Universal Kit A

G/R-25 Kit A

Kit contains 3 Pinions and various shims to suit Pinion at Rest requirement

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10,11, 13	40mm	48mm	3 Hole 127/90/90mm	12 or 24 Advise	2.5 or 4.5 Kw	89mm	10mm	L & R Advise

Universal Kit A

G/R-25 Kit B

Kit contains 3 Pinions and various shims to suit Pinion at Rest requirement

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10,11, 13	40mm	48mm	3 Hole 127/90/90mm	12 or 24 Advise	2.5 or 4.5 Kw	89mm	10mm	L & R Advise

VOLVO

Volvo FL6 with 5.5 Ltr D6A -TD60-TD61-

S/N-8600

TD61-TD63-D70B-D70C-D70HC eng 1985 - on

also B6F-F613-F614-F615-F616-F617-F610-F611-F70-F7F-N7-B57-BB57-FL4

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	48mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	11mm	L RHS

Volvo Penta Marine TD40 & TMD30 and AQD41-AQDA41- G/R-25 Kit A

D40-MD30

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	48mm	3 Hole 127/90/90mm	12	4hp	89mm	11mm	L RHS

Volvo Penta Marine Models 2002-2003-431A-500-501-570-740

AQ120-AQ145-AQ200D-AQD32A-B21-B22-MD11C-MD17C-MD18-MD21

MD21A-MD2B-MD2HY-MD30-MD32A-MD3B-MD7A-TAMD30A-TAMD30B

TAMD30C-TAMD41A-TAMD70E-TDM40-TDM30A

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	28mm	3 Hole 127/90/90mm	24	4.5 Kw	89mm	10mm	R LHS

Volvo VE12 1994 - 06

S/N-19506

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	5.0 Kw	92	12mm	R LHS

Volvo with Cummins VT300 and Detroit 716 Series Eng

S/N-18570

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
12	56	48	3 Hole 27/127/127mm	12	5.0 Kw	92	12mm	R LHS

VM DIESEL

VM Diesel

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	34mm	21mm	2 Hole 105mm	12	2.5 Kw	82mm	11mm	L RHS

WESTERN STAR

Western Star with Cummins C-15 Engines

RSO5GR-12

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	49mm	48mm	3 Hole 27/127/127mm	12	4.5Kw	92mm	12mm	R LHS

YANMAR

**Yanmar Sterndrive Models 6LY2 - 6LYA - 6LYM - 6LYUTE - also
suits 6T95L - 4T95L - 3T95L Engines**

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
11	40mm	20mm	3 Hole 127/90/90mm	12	2.5 Kw	95mm	13mm	L RHS

• Sample Starter Motor required

**Yanmar Inboard 3T95- 3T95L 1980 - on - 4LH-A - 4LH-3TE
LH-THE - LH-TE - LH-DTE - 3TN66E - YM5000 - YM6000 - YM7000 - 3T84HL
4T95L - 6T95L - 4JH2-DTBE - 4JH2-E - 4JH2-JE - 4JH2-THE - 4TN78
4TN82 - 2QM20 - 2T90 - 3T80D - 3T80J-3TNB84-YM2210D-YM2610-YM3000**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
15	44mm	23mm	2 Hole 120mm	12	2.0 Kw	95mm	13mm	L RHS

Note: Original has Flush Pinion - check for stepped ring gear clearance.

Yanmar 3 Cyl Diesel 3 GM30F **G/R-30/YANMAR-A**

Note: Waterproof

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	18mm	2 Hole 110mm	12	3.0Hp	70mm	11mm	NA

• Replaces Hitachi 128170-77010 S114-303A 12v

Yanmar 3 Cyl Diesel **G/R-30/YANMAR-B**

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
9	29mm	20mm	2 Hole 115mm	12	2	75	11mm	NA

• Replaces Nippon-Denso 428000-1591 YM 119717-77010

YALE

Yale Forklift with V6 4.3 Ltr Eng 1996 - on

Pinion Teeth	Pinion Diameter	Pinion at Rest	Mt. holes C/C	Voltage	Power Rating	Spigot Diameter	Mt. holes Diameter	Mounting & Switch
10	40mm	48mm	2 Hole 127mm	12	2.0 Kw	88mm	11	L RHS

- Sample Starter Motor required