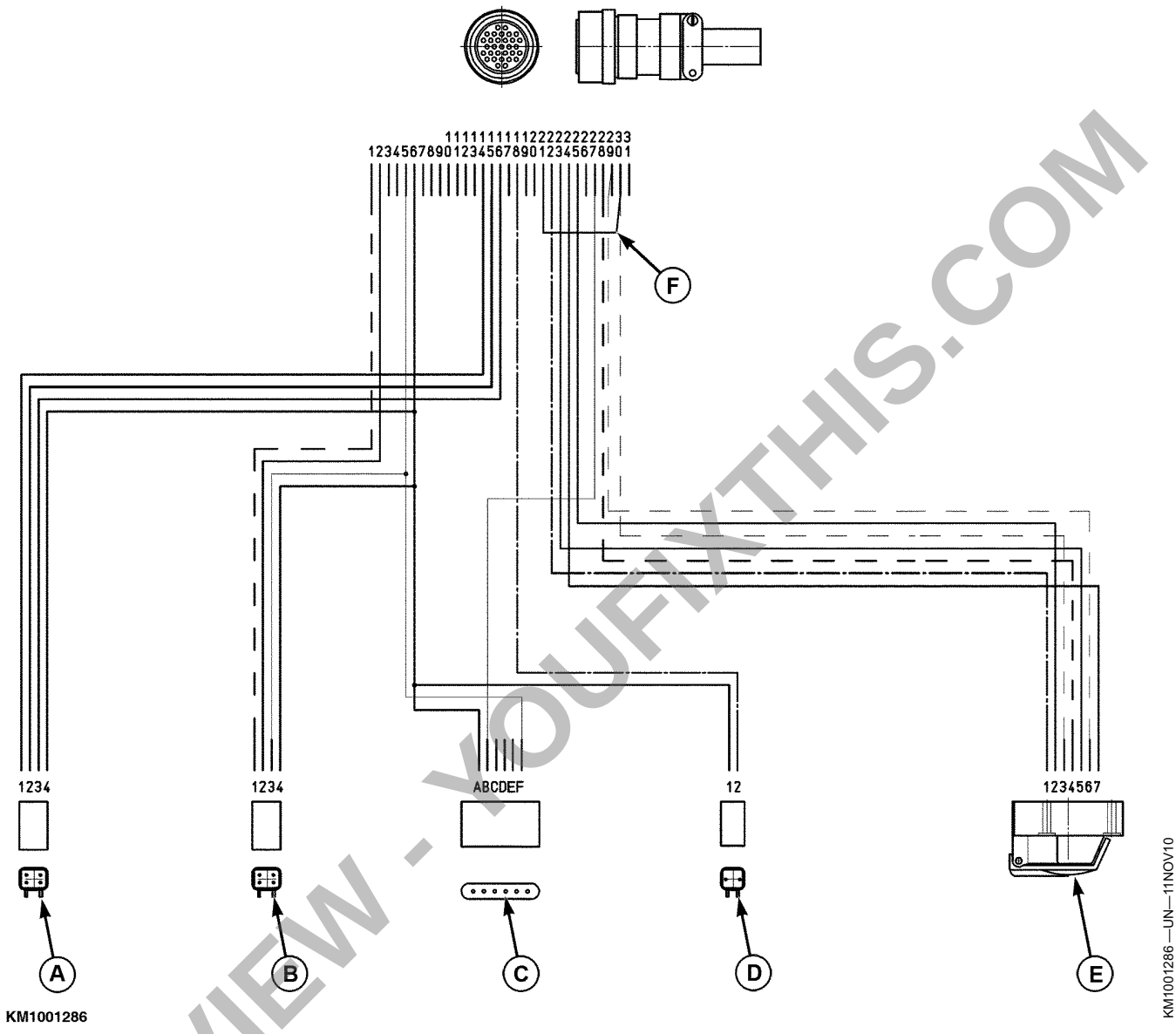
General Wiring Diagram



General Wiring Diagram

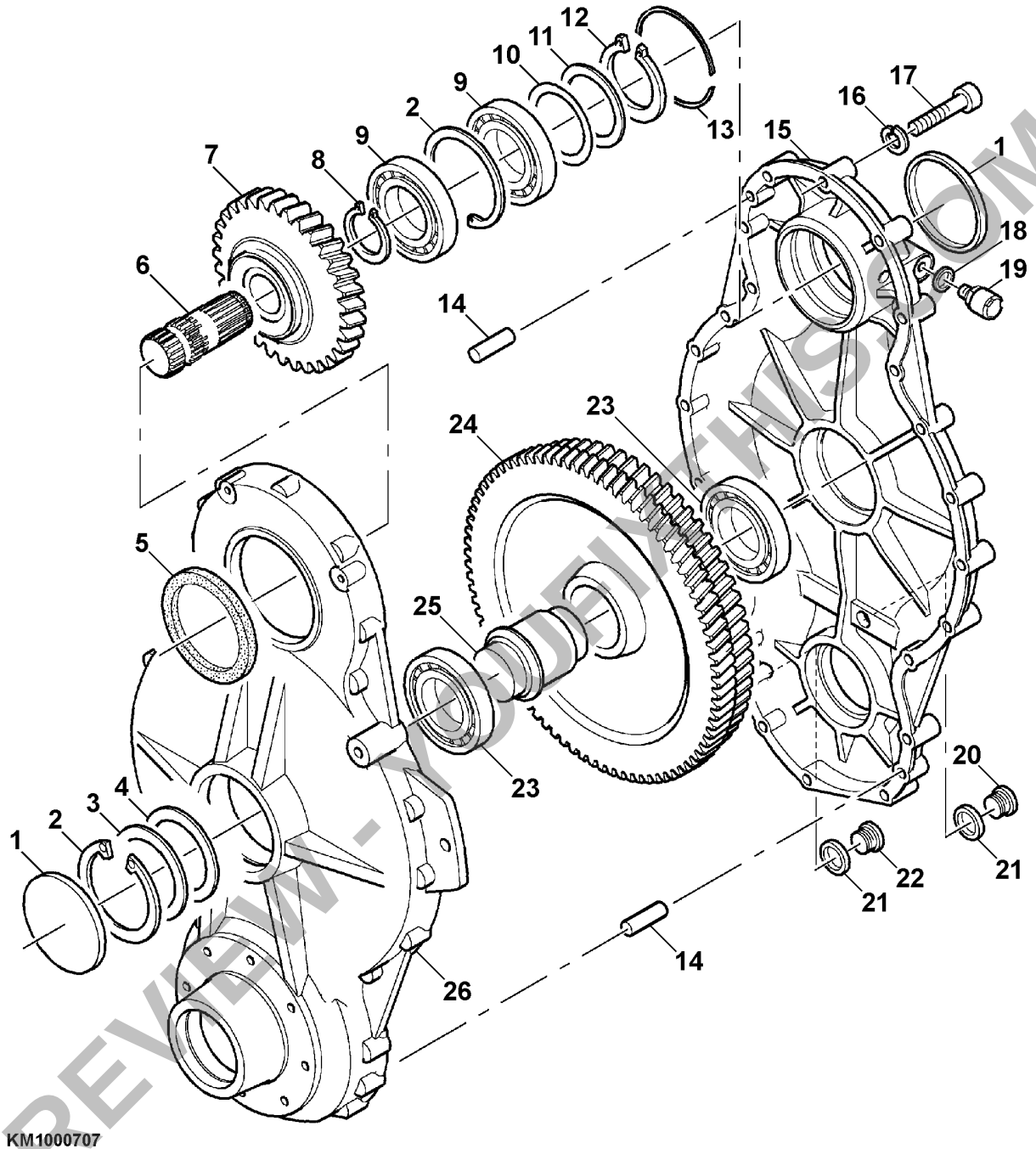
A—Steering assistance
B—Header height control
C—Header detection module
D—Speed sensor
E—Socket
F—Jumper between Pin 21 and 30

KM00321,0000391 -19-11NOV10-1/1

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Gear Box, Exploded View (Part 1)



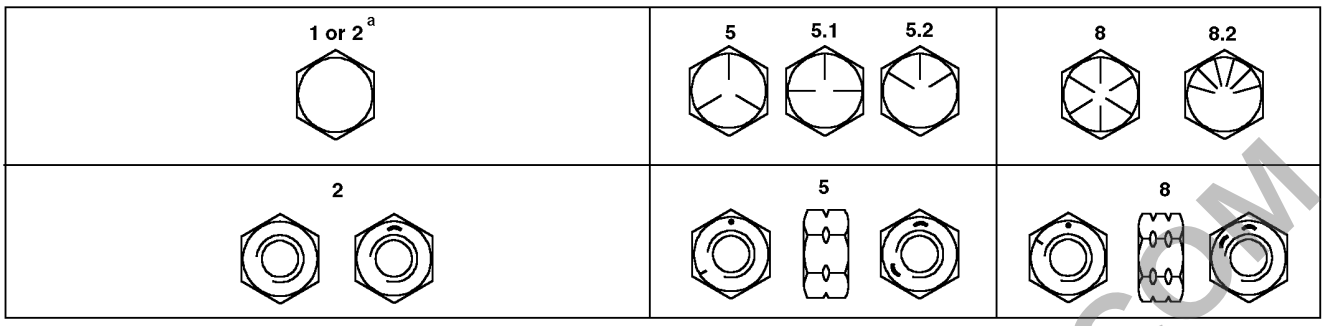
1— Cap
2— Snap ring
3— Washer
4— Shim
5— Radial seal ring
6— Shaft
7— Spur gear
8— Snap ring
9— Tapered roller bearing
10— Shim
11— Washer
12— Snap ring
13— Snap ring
14— Spring pin
15— Gear box half
16— Spring ring
17— Screw
18— Seal ring
19— Bleed valve
20— Drain plug
21— Seal ring
22— Screw plug
23— Tapered roller bearing
24— Spur gear
25— Pin
26— Gear box half

OULXH60,000026C -19-04SEP08-1/1

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Unified Inch Bolt and Screw Torque Values



Top, SAE Grade and Head Markings; Bottom, SAE Grade and Nut Markings

	Grade 1 (No Mark)		Grade 2[a] (No Mark)		Grade 5, 5.1 or 5.2		Grade 8 or 8.2	
Size	**Lubricated[b] N·m (lb-ft)**	**Dry[c] N·m (lb-ft)**	**Lubricated[b] N·m (lb-ft)**	**Dry[c] N·m (lb-ft)**	**Lubricated[b] N·m (lb-ft)**	**Dry[c] N·m (lb-ft)**	**Lubricated[b] N·m (lb-ft)**	**Dry[c] N·m (lb-ft)**
1/4	3.8 (2.8)	4.7 (3.5)	6 (4.4)	7.5 (5.5)	9.5 (7)	12 (9)	13.5 (10)	17 (12.5)
5/16	7.7 (5.7)	9.8 (7.2)	12 (9)	15.5 (11.5)	19.5 (14.5)	25 (18.5)	28 (20.5)	35 (26)
3/8	13.5 (10)	17.5 (13)	22 (16)	27.5 (20)	35 (26)	44 (32.5)	49 (36)	63 (46)
7/16	22 (16)	28 (20.5)	35 (26)	44 (32.5)	56 (41)	70 (52)	80 (59)	100 (74)
1/2	34 (25)	42 (31)	53 (39)	67 (49)	85 (63)	110 (80)	120 (88)	155 (115)
9/16	48 (35.5)	60 (45)	76 (56)	95 (70)	125 (92)	155 (115)	175 (130)	220 (165)
5/8	67 (49)	85 (63)	105 (77)	135 (100)	170 (125)	215 (160)	240 (175)	305 (225)
3/4	120 (88)	150 (110)	190 (140)	240 (175)	300 (220)	380 (280)	425 (315)	540 (400)
7/8	190 (140)	240 (175)	190 (140)	240 (175)	490 (360)	615 (455)	690 (510)	870 (640)
1	285 (210)	360 (265)	285 (210)	360 (265)	730 (540)	920 (680)	1030 (760)	1300 (960)
1-1/8	400 (300)	510 (375)	400 (300)	510 (375)	910 (670)	1150 (850)	1450 (1075)	1850 (1350)
1-1/4	570 (420)	725 (535)	570 (420)	725 (535)	1280 (945)	1630 (1200)	2050 (1500)	2600 (1920)
1-3/8	750 (550)	950 (700)	750 (550)	950 (700)	1700 (1250)	2140 (1580)	2700 (2000)	3400 (2500)
1-1/2	990 (730)	1250 (930)	990 (730)	1250 (930)	2250 (1650)	2850 (2100)	3600 (2650)	4550 (3350)

[a] Grade 2 applies for hex cap screws up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

[b] "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.

[c] "Dry" means plain or zinc-plated without any lubrication.

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Torque values listed are for general use only.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

ZX09263,0001D10 -19-27JUN07-1/1

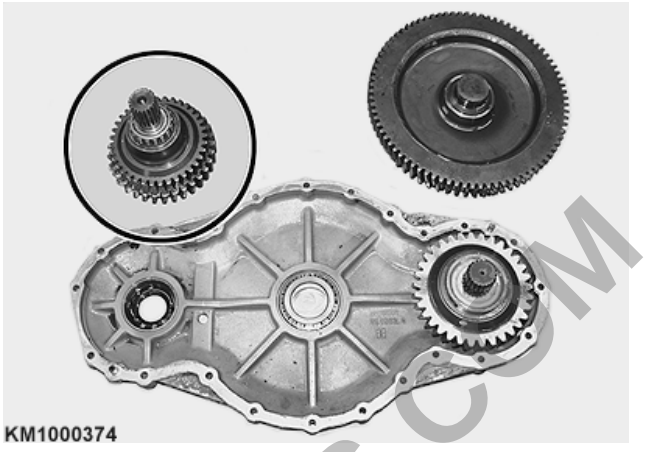
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Disassemble the Output Shaft

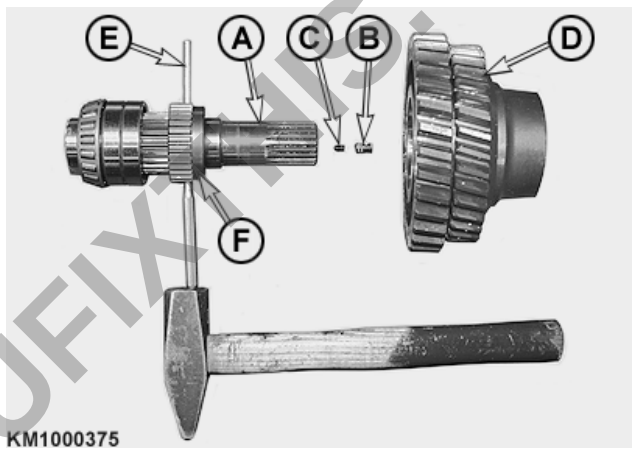
1. Drive output shaft (A) out of spur gears (D).
2. Remove threaded pins (B) and (C).
3. Drive out pin (E).
4. Pull off splined bushing (F).

A—Output shaft
B—Threaded pin
C—Threaded pin
D—Spur gears
E—Pin
F—Splined bushing



KM1000374

KM1000374 —UN—05AUG08



KM1000375

KM1000375 —UN—05AUG08

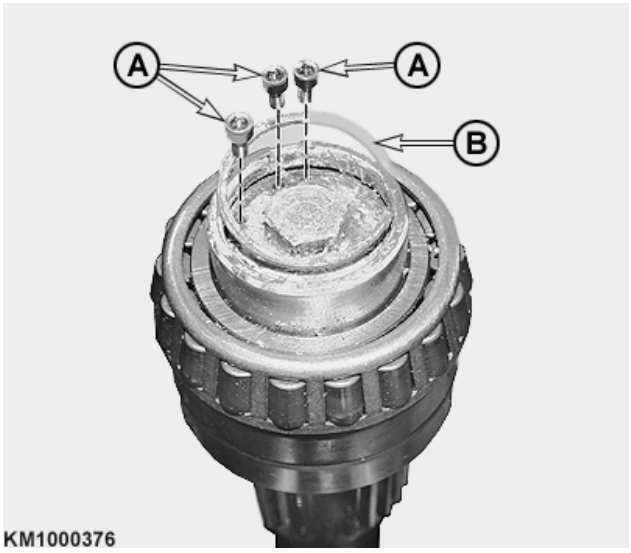
OULXH60,0000271 -19-20AUG08-1/1

Remove Shift Quadrant

1. Remove hex. socket screws (A) and snap ring (B).

IMPORTANT: When removing the shift quadrant, pay attention to the position of the hex. socket screws. Mark positions if necessary.

A—Hex. socket screws
B—Snap ring



KM1000376

KM1000376 —UN—06AUG08

Continued on next page

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Troubleshooting, 450FI Rotary Harvesting Unit

CAUTION: Before carrying out adjustment or service work, ALWAYS shut off engine, remove ignition key and wait until all moving parts have come to a stop.

Symptom	Problem	Solution
High power requirement despite poor cut	Rotating blades are dull	Replace the rotating blades
	Defective cleaners	Install new cleaners
Grinding noise at the blades	Rotor is dirty	Clean the rotor. If possible, the cutting area should be cleaned out before the unit is used
	Defective cleaners	Install new cleaners
Rotary harvesting unit is vibrating	Dirty rotating blades cause imbalance	Clean the rotating blades
	Asymmetrically rotating blades cause imbalance	Always replace rotating blades in pairs
	One of the cleaners has broken	Replace both cleaners
	Imbalance at rotating blade caused by excessive vertical play	Straighten the blade or install new blades
The stalks are pushed forward before they are cut (long, uneven stubble)	Leaves accumulated at the dividers	Clean the dividers
	One of the cleaners has broken	Replace both cleaners
Gathering drums stopped rotating	Blockage in the feeding area	Reverse the gathering drums briefly. Reverse them repeatedly if necessary
	Worn skid shoes	Replace
	Transmission defective	See your New Holland dealer
Transmission overheating	Transmission oil level too high or too low	Check transmission oil level, and add or drain if necessary.
Gathering drums and rotating blades do not start	Claw clutch defective	See your New Holland dealer
The entire l.h. or r.h. side of the unit stopped rotating	L.h. or r.h. friction clutch defective	See your New Holland dealer
The unit cannot be folded or unfolded	A foreign body (e.g. grain of sand) is obstructing the restrictor	See your New Holland dealer
Poor cut when the rows are far apart	The unit is tackling 5 rows of plants - the middle row is hindering the cut	Tackle only 4 rows of plants or see your New Holland dealer, if necessary.

KM00113,000005B -19-26NOV09-1/1

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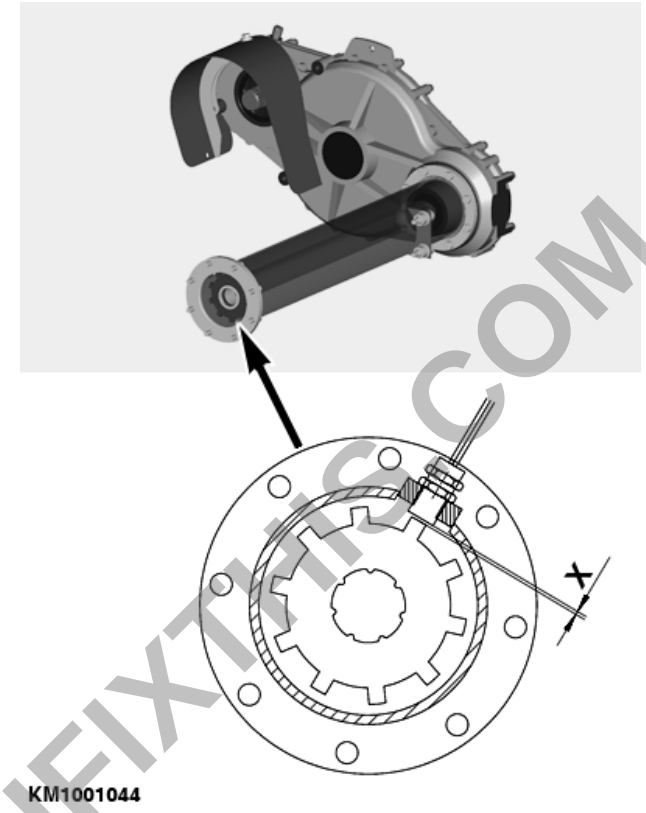
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Speed Sensor

Speed Sensor Adjustment

Always keep distance (X) of 1.0—2.0 mm (0.04—0.08 in.) between sensor and toothed washer.

X—1.0—2.0 mm (0.04—0.08 in.)



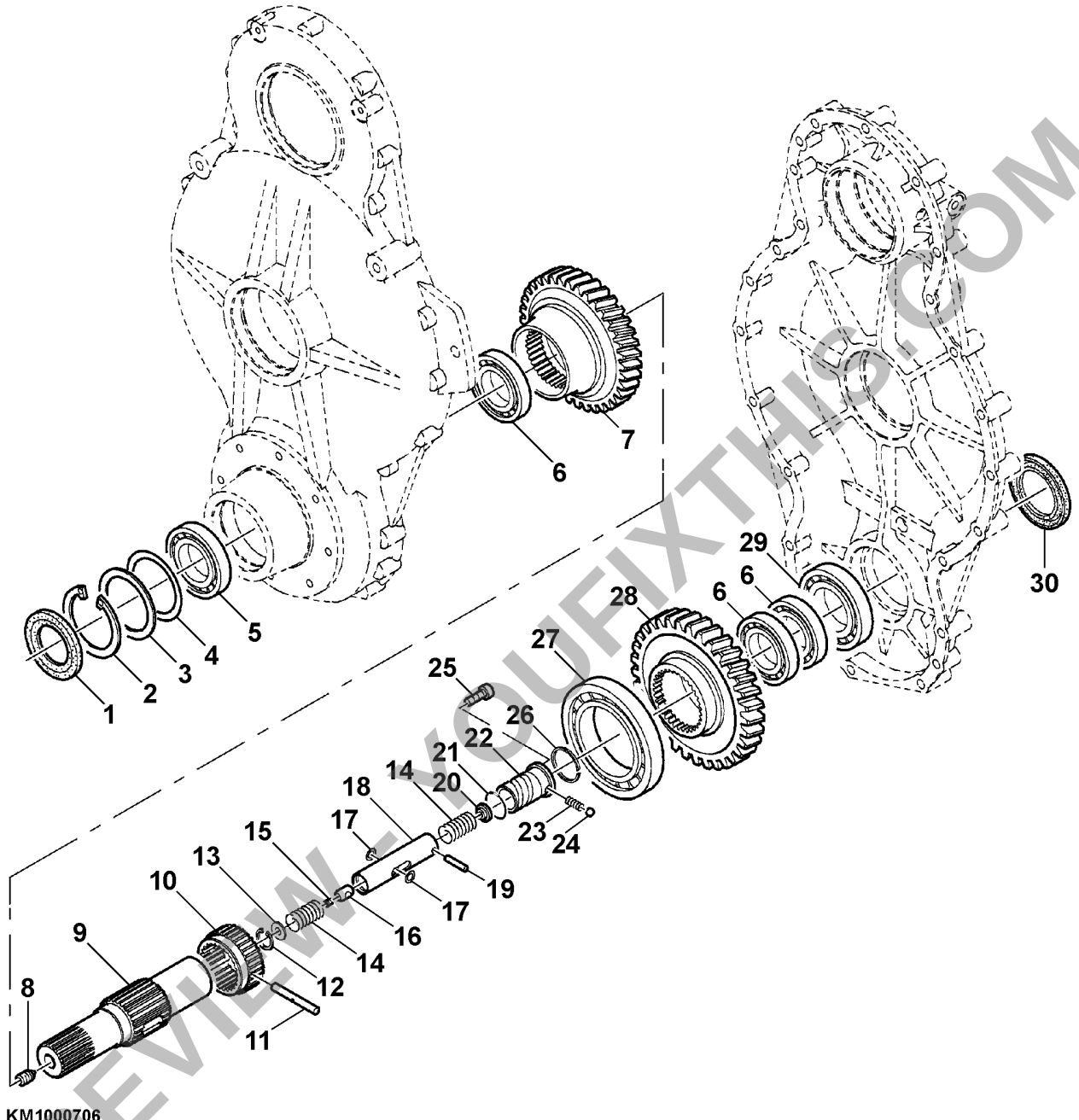
Speed Sensor

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Gear Box, Exploded View (Part 2)



KM1000706 —UN—04SEP08

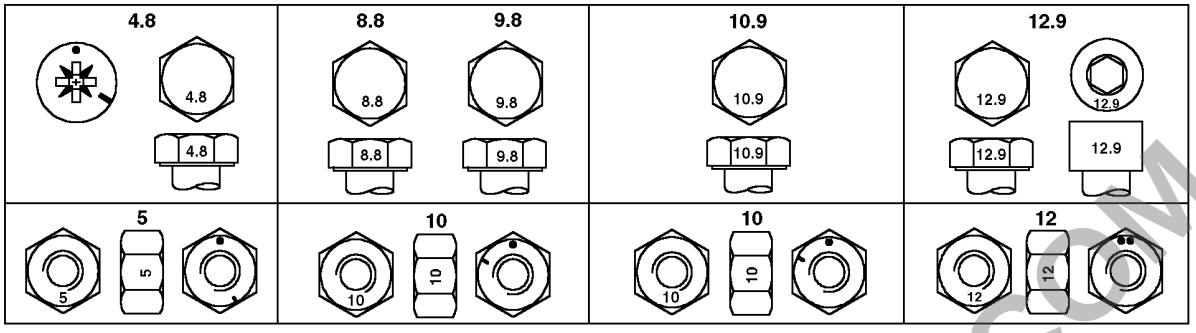
1— Radial seal ring
2— Snap ring
3— Washer
4— Shim
5— Tapered roller bearing
6— Ball bearing
7— Spur gear
8— Threaded pin
9— Shaft
10— Splined bushing
11— Pin
12— Snap ring
13— Washer
14— Pressure spring
15— Threaded pin
16— Retainer
17— Washer
18— Driver
19— Dowel pin
20— Washer
21— O-ring
22— Shift collar
23— Pressure spring
24— Ball
25— Screw
26— Snap ring
27— Ball bearing
28— Spur gear
29— Tapered roller bearing
30— Radial seal ring

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Metric Bolt and Screw Torque Values



Top, Property Class and Head Markings; Bottom, Property Class and Nut Markings

	Grade 4.8		Grade 8.8 or 9.8		Grade 10.9		Grade 12.9	
Size	**Lubricated[a] N·m (lb-ft)**	**Dry[b] N·m (lb-ft)**	**Lubricated[a] N·m (lb-ft)**	**Dry[b] N·m (lb-ft)**	**Lubricated[a] N·m (lb-ft)**	**Dry[b] N·m (lb-ft)**	**Lubricated[a] N·m (lb-ft)**	**Dry[b] N·m (lb-ft)**
M6	4.7 (3.5)	6 (4.4)	9 (6.6)	11.5 (8.5)	13 (9.5)	16.5 (12.2)	15.5 (11.5)	19.5 (14.5)
M8	11.5 (8.5)	14.5 (10.7)	22 (16)	28 (20.5)	32 (23.5)	40 (29.5)	37 (27.5)	47 (35)
M10	23 (17)	29 (21)	43 (32)	55 (40)	63 (46)	80 (59)	75 (55)	95 (70)
M12	40 (29.5)	50 (37)	75 (55)	95 (70)	110 (80)	140 (105)	130 (95)	165 (120)
M14	63 (46)	80 (59)	120 (88)	150 (110)	175 (130)	220 (165)	205 (150)	260 (190)
M16	100 (74)	125 (92)	190 (140)	240 (175)	275 (200)	350 (255)	320 (235)	400 (300)
M18	135 (100)	170 (125)	265 (195)	330 (245)	375 (275)	475 (350)	440 (325)	560 (410)
M20	190 (140)	245 (180)	375 (275)	475 (350)	530 (390)	675 (500)	625 (460)	790 (580)
M22	265 (195)	330 (245)	510 (375)	650 (480)	725 (535)	920 (680)	850 (625)	1080 (800)
M24	330 (245)	425 (315)	650 (480)	820 (600)	920 (680)	1150 (850)	1080 (800)	1350 (1000)
M27	490 (360)	625 (460)	950 (700)	1200 (885)	1350 (1000)	1700 (1250)	1580 (1160)	2000 (1475)
M30	660 (490)	850 (625)	1290 (950)	1630 (1200)	1850 (1350)	2300 (1700)	2140 (1580)	2700 (2000)
M33	900 (665)	1150 (850)	1750 (1300)	2200 (1625)	2500 (1850)	3150 (2325)	2900 (2150)	3700 (2730)
M36	1150 (850)	1450 (1075)	2250 (1650)	2850 (2100)	3200 (2350)	4050 (3000)	3750 (2770)	4750 (3500)

[a] *"Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.*

[b] *"Dry" means plain or zinc-plated without any lubrication.*

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Torque values listed are for general use only.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

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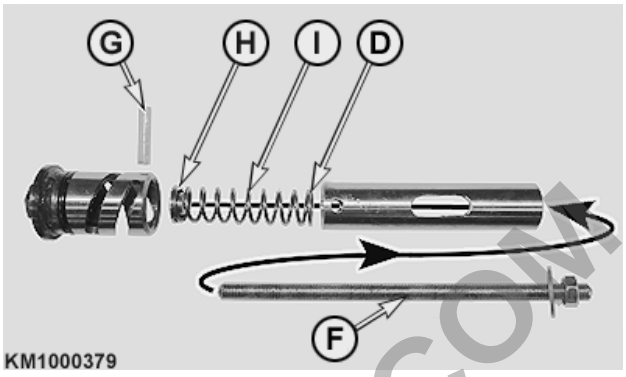
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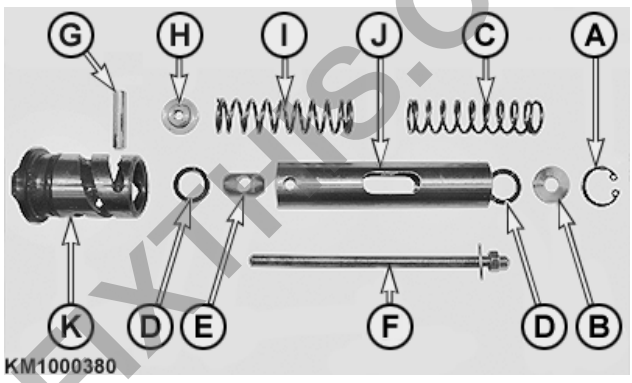
3. Screw dealer-fabricated special tool DFKM001 (F) in the washer thread (H) as shown in the illustration, and slightly pre-tension the spring (I).
4. Drive out dowel pin (G).

Shift quadrant, components

A—Snap ring
B—Washer
C—Pressure spring
D—Washer
E—Retainer
F—Special tool - M6 x 200 mm threaded rod, M6 hex. nut, 6.4 mm washer
G—Dowel pin
H—Washer
I— Pressure spring
J— Driver
K—Shift collar



KM1000379 —UN—06AUG08



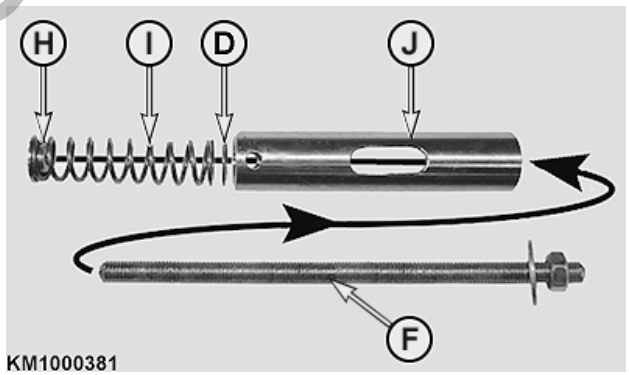
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OULXH60,0000273 -19-20AUG08-2/2

Assemble the Shift Quadrant

Assemble the shift quadrant in reverse order:

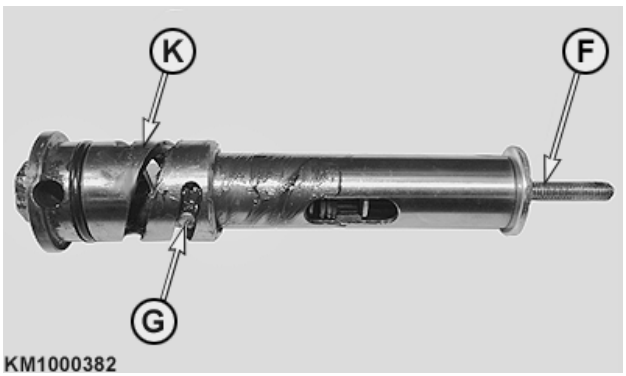
1. Install washer (H) with spring (I) and washer (D) in driver (J) and pre-tension using special tool DFKM001 (F).



KM1000381 —UN—06AUG08

OULXH60,0000274 -19-20AUG08-1/7

2. Slide shift collar (K) onto driver and insert dowel pin (G).
3. Remove special tool (F).



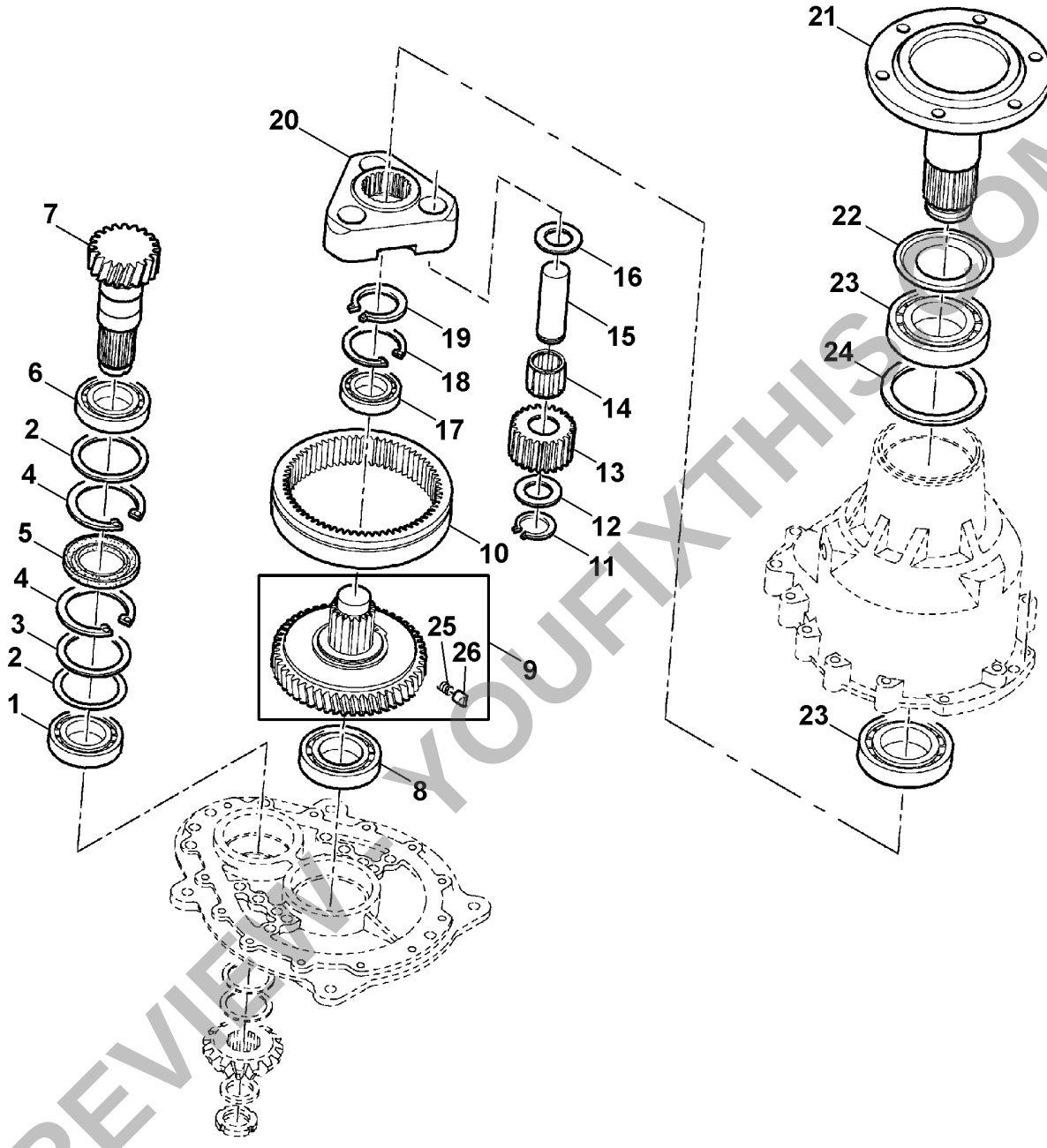
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Continued on next page

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Planetary Drive, Exploded View



KM1000705

KM1000705 —UN—04SEP08

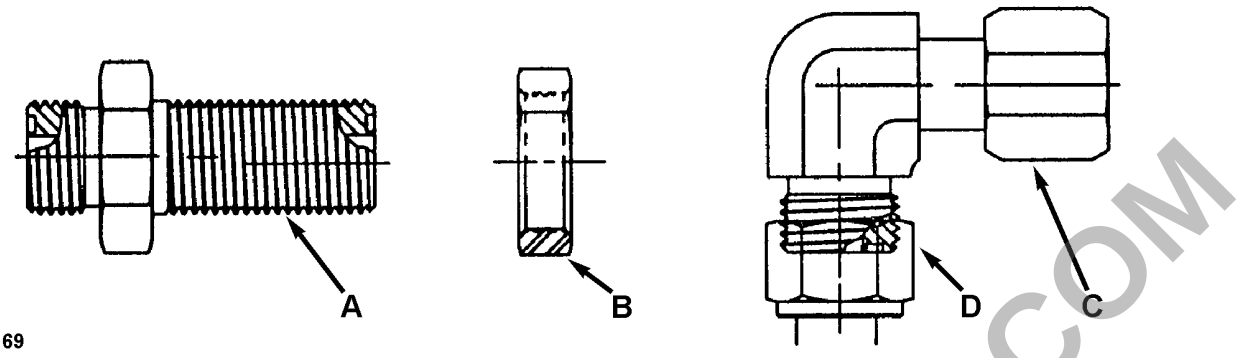
1— Tapered roller bearing
2— Washer
3— Shim
4— Snap ring
5— Radial seal ring
6— Bearing
7— Shaft
8— Ball bearing
9— Ratchet
10— Spur gear
11— Snap ring
12— Washer
13— Spur gear
14— Needle bearing
15— Pin
16— Axial bearing washers
17— Ball bearing
18— Snap ring
19— Snap ring
20— Planetary carrier
21— Shaft
22— Special ring
23— Ball bearing
24— Washer
25— Pressure spring
26— Cam

ARS,0000027 -19-04SEP08-1/1

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Hydraulic System Inch Fitting Torque Values



A—Bulkhead fitting **B—Locknut** **C—Union nut** **D—Union nut**

	Fittings with flat-faced ring seal			
	Union nut		Locknut for bulkhead fitting	
Thread size	**N·m**	**lb-ft**	N·m	**lb-ft**
9/16—18	16	12	5	3.5
11/16—16	24	18	9	6.5
13/16—16	50	37	17	12.5
1—14	69	51	17	12.5
1-3/16—12	102	75	17	12.5
1-7/16—12	142	105	17	12.5
1-11/16—12	190	140	17	12.5
2—12	217	160	17	12.5

The torques in the table above are intended only as approximate values and do NOT apply if a different torque value is listed for specific fittings at other points in this manual. Check fittings regularly to make sure they are seated properly.

When replacing fittings, be sure to use parts with an equal or higher grade to the parts you are replacing. Items of hardware (e.g. union nuts) that are of a higher grade should be tightened to the same torque value as the parts they replace.

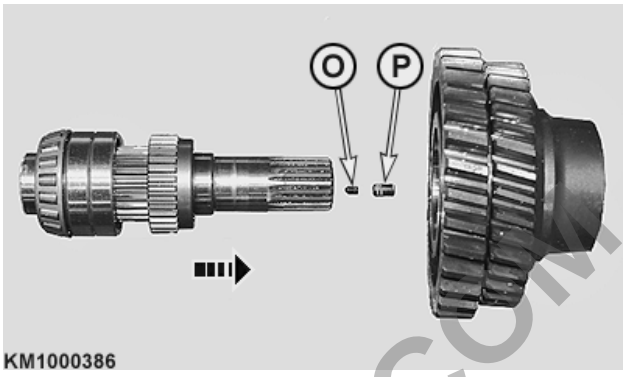
It is vitally important to make sure that the sealing faces are clean and that the O-rings have been inserted properly.

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10. Insert threaded pin (O) using Loctite 273 and secure pin (L) that way.
11. Insert threaded pin (P) using Loctite 574.
12. Install shift quadrant in spur gears.



KM1000386 —UN—06AUG08

OULXH60,0000274 -19-20AUG08-7/7

Assemble the Gear Box

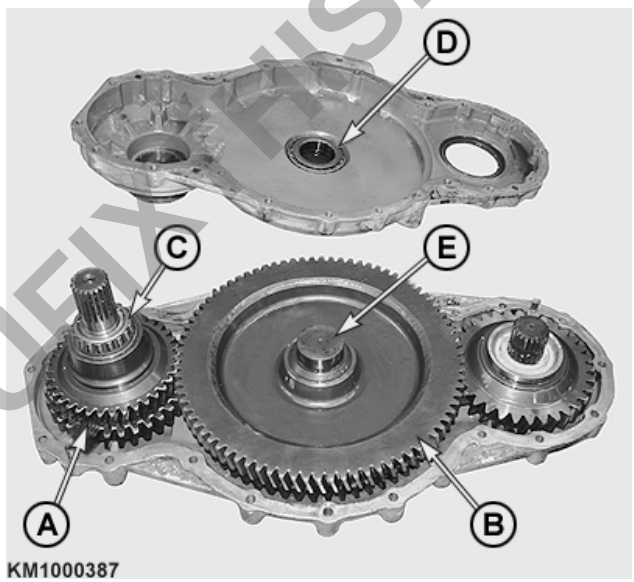
1. Install pre-assembled output shaft (A) in lower gear box half.
2. Slide tapered roller bearing (C) onto output shaft.
3. Install spur gear (B) in lower gear box half.

NOTE: Heat up the spur gear hub (B) to 120 °C (248 °F), then insert pin (E) using Loctite 620.

4. Remove tapered roller bearing (D) from upper box half and slide onto pin (E).

IMPORTANT: Adjust an axial play from 0 to slight preload on spur gears. Consider the instructions on the following pages.

Coat mating surface of box half with sealant and attach upper to lower half by means of screws. Observe specified torque. Add 2.9 L (0.76 U.S. gal) of gear oil.



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