SYMBOLS

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it would be explained specifically in the text without the use of the symbols.

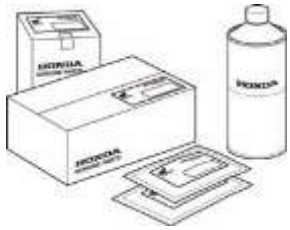
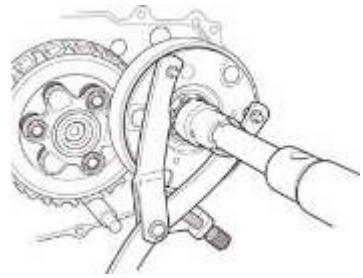
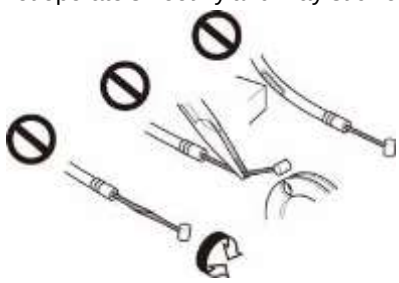
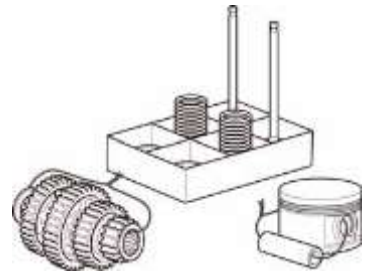
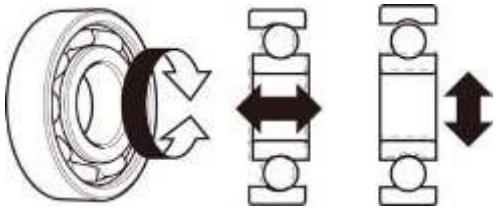
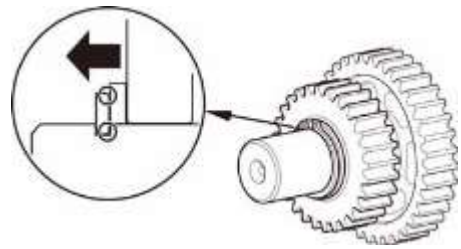
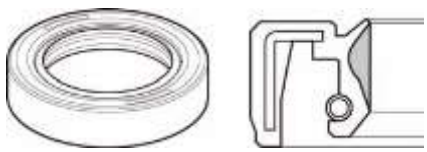
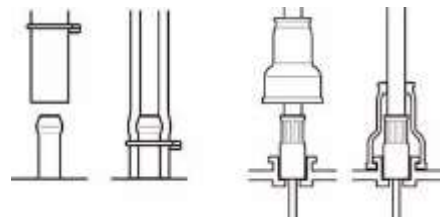
INSTRUCTION SYMBOL

	Removal or Disassembly procedure. Disconnect the connector.		Installation or Assembly procedure. Connect the connector.
	Order of removal/disassembly with a point of note.		Order of installation/assembly with a point of note.
	Tighten to the specified torque.		Replace with a new one before assembly.
	Check the part for an inspection.		Measure the part for an inspection.
	Turn ignition switch to OFF.		Turn ignition switch to ON.
	Start the engine.		Measure a resistance or check continuity.
	Measure a voltage.		Measure an ampere.
	Use the Honda special tool.		Refer to Spec (Specific) Service Manual for the instruction.

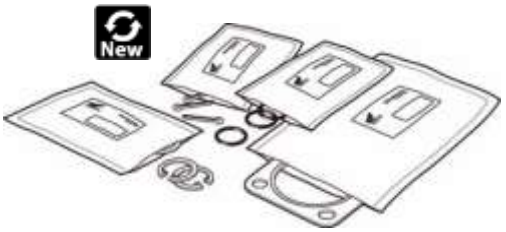
LUBRICATION AND SEAL SYMBOL

	Use the recommended engine oil.		Apply molybdenum oil solution (mixture of an engine oil and molybdenum grease in a ratio of 1:1).
	Apply a specified grease.		Apply a liquid sealant.
	Apply a locking agent. Use a medium strength one unless otherwise specified.		Use specified brake fluid.
	Use a specified fork oil or suspension fluid.		

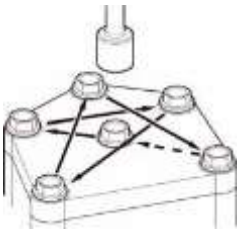
SERVICE RULES

Use genuine Honda or Honda-recommended parts and lubricants or their equivalents. Parts that don't meet Honda's design specifications may cause damage to the vehicle. 	Use the special tools designed for this product to avoid damage and incorrect assembly. 
Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bend. 	In removal and disassembly, record the location of each part for installation and assembly. 
After cleaning, check the bearing by slowly rotating the inner race. If any radial play, axial play or roughness is felt, it must be replaced. 	Snap rings are always installed with the chamfered (rolled) edge facing away from the thrust of the mating part. 
Oil seals are always installed with grease packed into the seal cavity and the manufacturer's name facing the outside (dry side). 	Rubber hoses should be installed so the end is bottomed onto its fitting. Rubber or plastic dust/dirt boots should be replaced securely in the exact positions. 

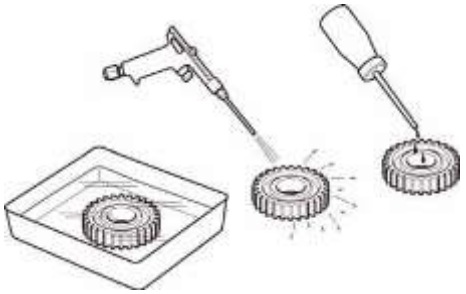
Install new gaskets, O-rings, cotter pins, and lock plates when reassembling.



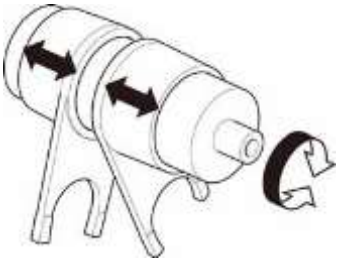
When tightening bolts or nuts, begin with the larger diameter or inner bolt first. Then tighten to the specified torque diagonally in incremental steps.



Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.

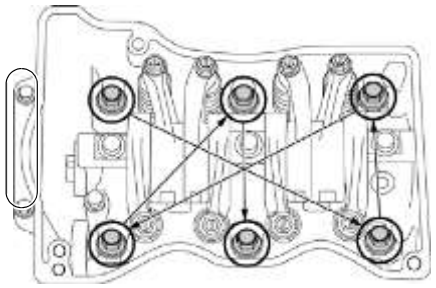


After reassembly, check all parts for proper installation and operation.



Cylinder head bolt removal order:
1. Loosen the smaller bolt first.
2. Loosen the bolts in a crisscross pattern from the outside inward.

Tighten the bolts in a crisscross pattern from the center outward.



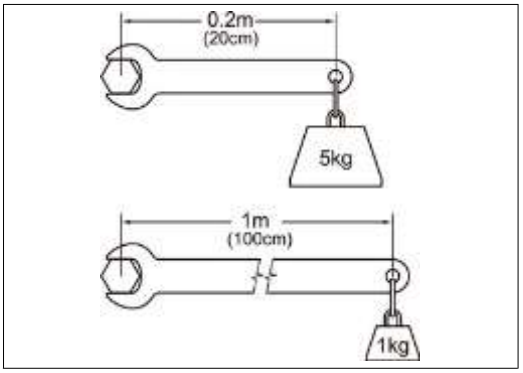
ABBREVIATION

Throughout this manual, the following abbreviations are used to identify the respective parts or systems.

Abbrev. term	Full term
ABS	Anti-lock Brake System
CBS	Combined brake system
CKP sensor	Crankshaft Position sensor
CMP sensor	Camshaft Position sensor
DLC	Data Link Connector
DTC	Diagnostic Trouble Code
ECM	Engine Control Module
ECT sensor	Engine Coolant Temperature sensor
EEPROM	Electrically Erasable Programmable Read Only Memory
EOT sensor	Engine Oil Temperature sensor
EVAP	Evaporative Emission
IACV	Idle Air Control Valve
IAT sensor	Intake Air Temperature sensor
ICM	Ignition Control Module
MAP sensor	Manifold Absolute Pressure sensor
MCS	Motorcycle Communication System
MIL	Malfunction Indicator Lamp
PAIR	Pulse Secondary Air Injection
PGM-FI	Programmed Fuel Injection
SCS short connector	Service Check Signal short connector
TP sensor	Throttle Position sensor
VS sensor	Vehicle Speed sensor

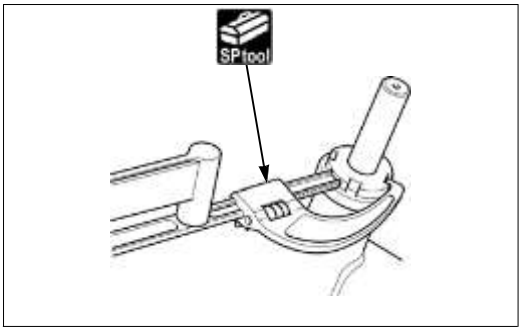
FASTENERS

TIGHTENING TORQUE



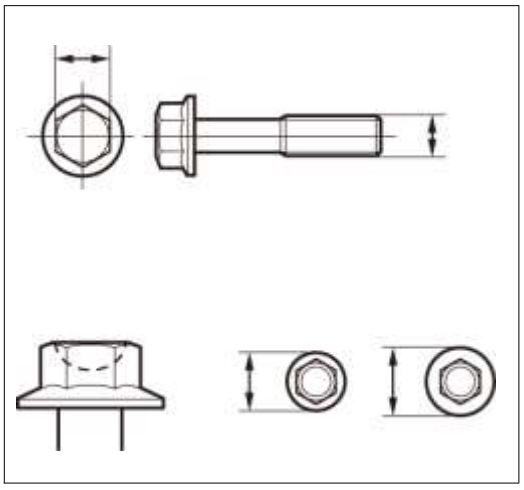
Torque values are determined according to fastener size and strength, and the strength of the parts that are fastened together.

Example; A torque of 1 kg-m refers to the moment of force obtained when a 1-meter long wrench is loaded with 1 kilogram. At the same moment, a heavier load is needed as the effective wrench length is shorter. 1 kg-m = 10 N·m, 1 kg-m = 7 ft.-lb.



The tightening torque when the torque wrench is attached to the special tool is greater than indicated.
Therefore, when tightening, the torque less than the indicated torque should be applied.

STANDARD TORQUE VALUES

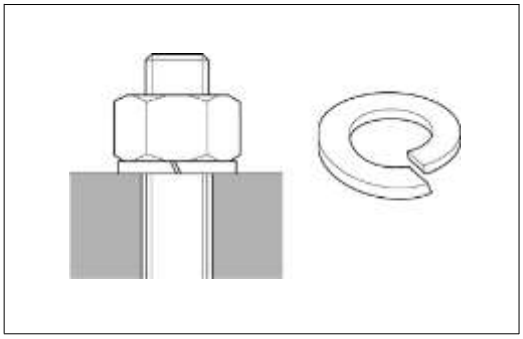


For the nuts and bolts other than ones for specific locations should be tightened with the correct torque according to the torque chart below.

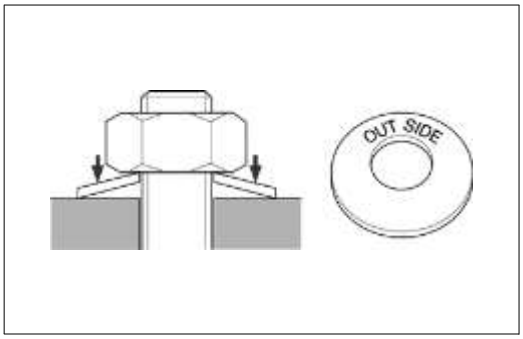
Thread dia.	FASTENER	N·m (kgf·m, lbf·ft)
5 mm	Hex bolt/nut	5 (0.5, 3.6)
6 mm	Hex bolt/nut	10 (1.0, 7)
8 mm	Hex bolt/nut	22 (2.2, 16)
10 mm	Hex bolt/nut	34 (3.5, 25)
12 mm	Hex bolt/nut	54 (5.5, 40)
5 mm	Screw	4 (0.4, 2.9)
6 mm	Screw	9 (0.9, 6.5)

Thread dia.	FASTENER	N·m (kgf·m, lbf·ft)
6 mm	8 mm head, small flange bolt	10 (1.0, 7)
6 mm	8 mm head, large flange bolt	12 (1.2, 9)
6 mm	10 mm head bolt/nut	12 (1.2, 9)
8 mm	Flange bolt/nut	27 (2.8, 20)
10 mm	Flange bolt/nut	39 (4.0, 29)

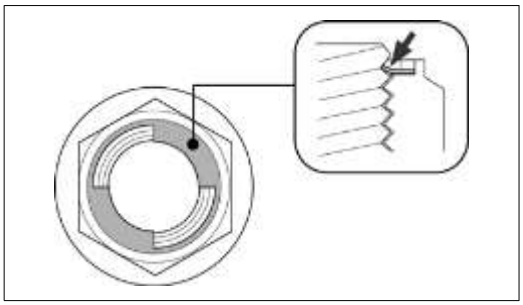
LOCKING/SPECIAL BOLT/NUT



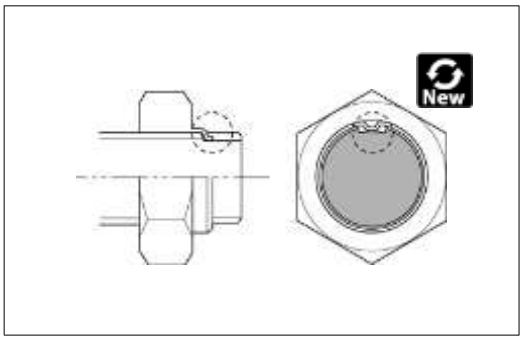
Lock Washer
- When the washer is compressed under the bearing surface pressure, the elasticity of the spring and the edges of the ring ends prevent loosening.
- Do not use the lock washer which have lost its elasticity or is deformed or eccentric.



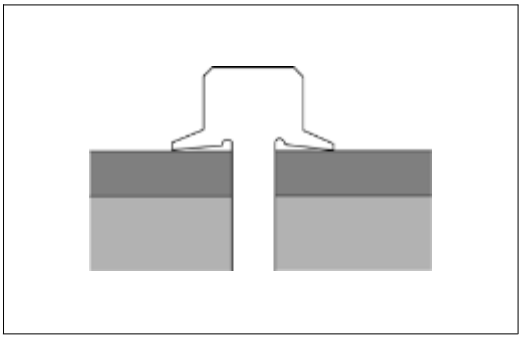
Cone Spring Lock Washer
- The bearing surface presses on the cone spring washer and the spring reaction presses against the nut to prevent it from loosening.
- Application:
  – Clutch lock nut
  – Primary gear lock nut
- Installing in the opposite direction prevents effective locking. Always install cone washers with their “OUTSIDE” mark facing out. If unmarked, install cone spring washers as shown in the column at left.



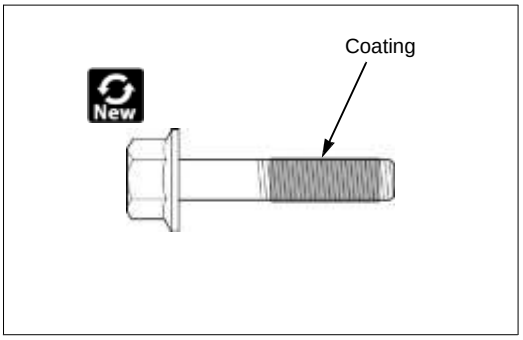
Self-lock Nut
- This is a nut with a spring plate on top. This spring plate presses against the thread, making it difficult for the nut to loosen. After removal, this type of nut can be used again.
- Application:
  – PRO-Link pivot point nuts
  – Axle nuts



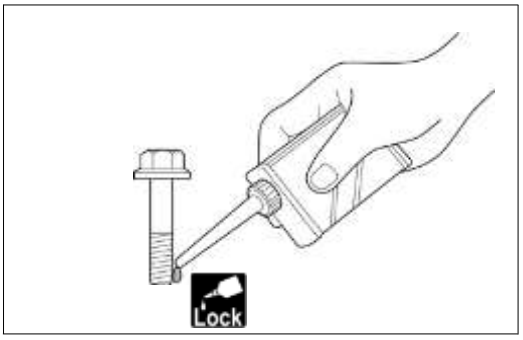
Stake-type Lock Nut
- Stake (or indent) the collar of the nut to make it match the groove in the shaft.
- Application:
  – Clutch center lock nut
  – Wheel bearing retainer
  – Shift drum stopper plate
- Replace with a new one after removal.



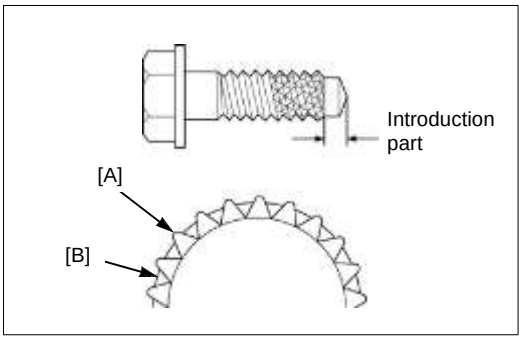
UBS Bolt
- The threads are pressed by the reaction on the inclined bolt flange.
- Application:
  – Cylinder
  – Cylinder head
  – Foot peg
  – Bracket



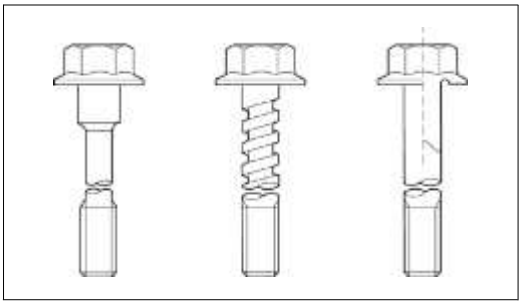
Pre-coated Bolt (ALOC Bolt)
- The pre-coated bolt has a special coating or sealant on its threads, to add locking and sealing function.
- Application:
  – Brake disc bolt
  – Brake caliper mounting bolt
- Replace with a new one after removal.



Locking Agent
- Apply a thread locking agent to the thread to prevent loosening.
- Application:
  – Stator coil bolt
  – Bearing retainer bolts
  – Shift drum stopper plate bolt
  – Fork socket bolts
  – Brake disc bolts
- Applying a small amount of adhesive to the end of the bolt threads distributes the adhesive throughout when the bolt is threaded in.

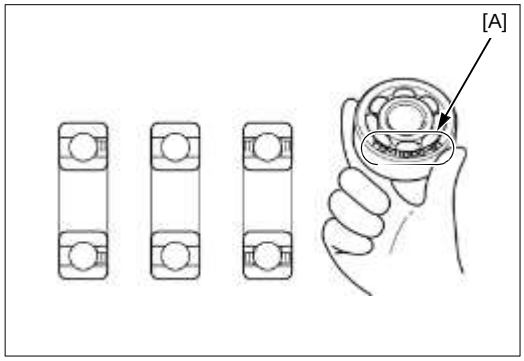


CT Bolt
- A CT bolt creates female threads when it screws into the unthreaded pilot hole.
- The lower half of the CT bolt features the combination of the standard threads [A] and the low threads [B].



Special Bolt
- Certain areas of a vehicle are subject to repeated and severe external forces. Special bolts with a high percentage of elastic deformation capability are used in these areas.
- Application:
  – Connecting rod bolt
  – Crankshaft journal bolt

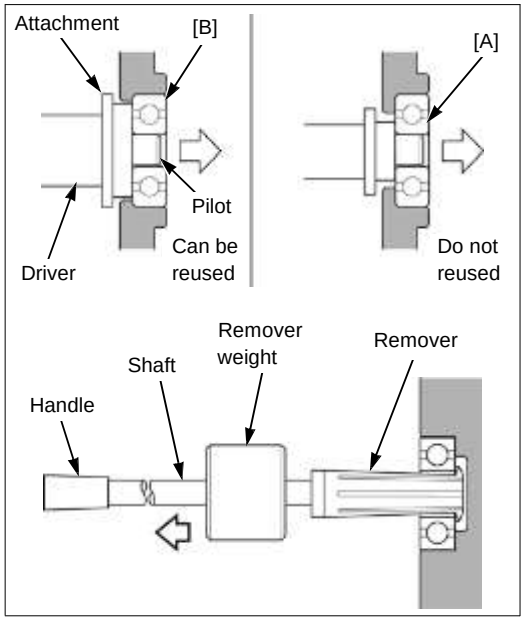
BEARING REPLACEMENT



Ball bearings are always installed with the manufacturer's name and size code [A] facing out. This is true for open, single-sealed and double-sealed bearings. Apply the proper grease to open and single-sealed bearings before reassembly.

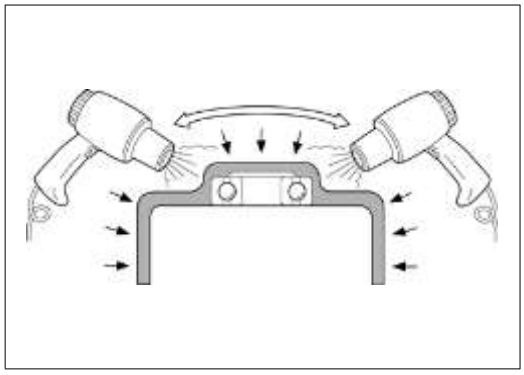
"U" or "Z" indicates a bearing with a rubber seal or metal shield respectively.

– U: Single rubber sealed type
– Z: Single metal sealed type
– UU: Double rubber sealed type
– ZZ: Double metal sealed type



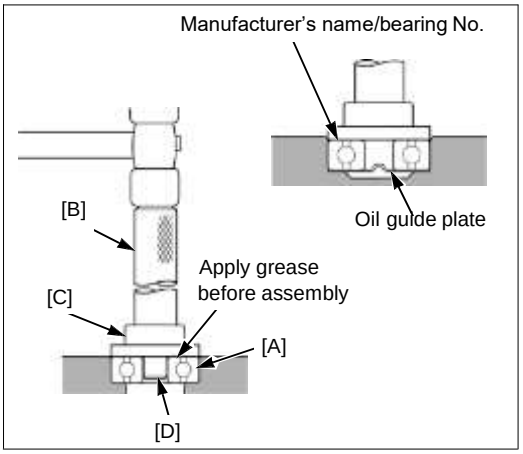
Ball bearings are removed using tools which apply force against one or both (inner [A] and outer [B]) races. If the force is applied against only one race (either inner or outer), the bearing will be damaged during removal and must be replaced.

If the bearing is in a blind hole in the crankcase and cannot be removed by hammering on the opposite side, remove it with a bearing remover. For recommended bearing removers, refer to the Tool Compatibility Table.



If the use of a bearing remover is not possible, remove the bearing by thermally expanding the case; slowly and uniformly heating the case with a heat gun (industrial dryer), or a hot plate.

To avoid burns, wear insulated gloves when handling the heated case.



Caution should be taken regarding the direction in which the bearing is installed. Apply the proper grease to the bearing before reassembly. The outer race [A] should be installed with a driver [B], attachment [C] and pilot [D]. The bearing must be installed in a parallel manner.

BEARING REMOVER COMPATIBILITY TABLE

BEARING NUMBER	I.D. (mm)	O.D. (mm)	TOOL NUMBER				
			BEARING REMOVER	SHAFT	HANDLE	WEIGHT	REMOVER SET
6000 6200 6300	10	26 30 35	07936-GE00200	07936-GE00100	Included with shaft	07741-0010201	-
6001 6201 6301	12	28 32 37	09936-1660110	07936-1660120	Included with shaft	07741-0010201	07936-1660001
6002 6202 6302	15	32 35 42	07936-KC10200	07936-KC10100	Included with shaft	07741-0010201	-
6003 6203 6303	17	35 40 47	07936-3710300	Included with remover	07936-3710100	07741-0010201	-
6004 6204 6304	20	42 47 52	07936-3710600	Included with remover	07936-3710100	07741-0010201	07936-3710001
6005 6205 6305	25	47 52 62	07936-ZV10100	Included with remover	07936-3710100	07741-0010201	-
6006 6206 6306	30	55 62 72	07936-8890300	Included with remover	07936-3710100	07741-0010201	-
6007 6207 6307	35	62 72 80	07936-3710400	Included with remover	07936-3710100	07741-0010201	-
60/22 62/22 63/22	22	44 50 56	070MC-MFR0100	Included with remover	07936-3710100	07741-0010201	-

TOOL COMPATIBILITY CHART

FITTING POINT			OUTER RACE																										INNER RACE							
TOOL NAME			ATTACHMENT											PILOT														DRIVER HANDLE	ATTACH-MENT			INNER DRIVER	ATTACH-MENT			INNER DRIVER HANDLE
TOOL NUMBER			07746-0010700	07946-1870100	07746-0010100	07746-0010200	07746-0010300	07746-0010400	07746-0010500	07746-0010600	07GAD-SD40101						07746-0040100	07746-0040200	07746-0040300	07746-0040400	07746-0040500	07746-0041000	07746-0010600, 07749-0010001	07746-0040700	07746-0040800	07746-0040900	07746-0020200	07746-0020300	07746-0020400	07746-0020100		07746-0030200	07746-0030300	07746-0030400 07746-0030100	
BEARING O.D. (mm) / I.D. (mm) / NUMBER		SIZE (mm)	24 x 26	28 x 30	32 x 35	37 x 40	42 x 47	52 x 55	62 x 68	72 x 75	78 x 90	10	12	15	17	20	22	25	30	35	40			16	18	20	(22)	25	30	35	(40)				
6000	10	26	●									●											●											
6001	12	28		●									●										●											
6002	15	32			●									●									●	●				●						
6003	17	35				●									●								●		●			●						
6004	20	42					●									●							●			●		●						
6005	25	47						●										●					●						●					●
6006	30	55							●										●				●							●				●
6007	35	62								●										●			●								●			●
6008	40	68									●										●		●											●
6009	45	75																					●											
6200	10	30			●							●											●											
6201	12	32				●							●										●											
6202	15	35					●							●									●	●				●						
6203	17	40						●							●								●		●			●						
6204	20	47							●							●							●			●		●						
6205	25	52								●								●					●						●					●
6206	30	62									●								●				●							●				●
6207	35	72																		●			●								●			●
6208	40	80																			●		●											●
6210	50	90																					●											
6300	10	35										●											●											
6301	12	37											●										●											
6302	15	42												●									●	●				●						
6303	17	47													●								●		●			●						
6304	20	52														●							●			●		●						
6305	25	62																●					●						●					●
6306	30	72																	●				●							●				●
6307	35	80																		●			●								●			●
6308	40	90																			●		●											●
62/22	22	50																●					●						●					
63/22	22	56																					●						●					