



Service and Parts Manual

45-8422-LG1

09/27/2017

OMEGA TECHNOLOGIES

15BF, 15LF, & 15SF Series

Right Angle Drills



Termination 52



Termination 62



Termination 72



Termination 42



Termination 92

For additional product information visit our website at <https://dotcotool.com/product-category/dotco-air-tools/dotco-pneumatic-drills/dotco-right-angle-drills/dotco-15lf-series-right-angle-drills/>

Nomenclature

	15	X	F	2	X	X	-	X	X	NL
Tool Series										
15 = Drill										
Throttle Type										
B = Button Throttle										
L = Locking Lever										
Note: "S" and "L" models are the same										
Motor Size										
F = 0.4 hp										
Handle Style										
2 = Right Angle										
Exhaust Type										
5 = Front Exhaust										
8 = Rear Exhaust										
Speed Options (RPM)										
500 Angle Head	600, 700, 45°, 360° Angle Heads									
1 = 3,700	1 = 5,300									
2 = 2,800	2 = 4,000									
3 = 2,300	3 = 3,300									
4 = 1,700	4 = 2,400									
5 = 700	5 = 1,000									
6 = 525	6 = 750									
7 = 420	7 = 600									
Termination Code: Angle Head Type										
4 = 45° Mini Angle Head	7 = 700 Series Angle Head									
5 = 500 Series Angle Head	9 = 360° Mini Angle Head									
6 = 600 Series Angle Head										
Termination Code: Output Type										
1 = #10-32 Output Spindle	4 = 5/16-24 Output Spindle									
2 = 1/4-28 Output Spindle	9 = 1/4 Capacity 3 Jaw Chuck (500 series head)									
3 = 9/32-40 Output Spindle										
Blade Option (Extra Cost)										
NL = Oil Less Blade										

Manufacturer:

Apex Tool Group, LLC
670 Industrial Drive
Lexington, South Carolina 29072, USA

Importer:

Apex Tool Group GmbH
Industriestraße 1
D-73463 Westhausen, Germany

For this Instruction Manual

The original language of this instruction manual is English. This Instruction Manual is intended for all persons who will operate and maintain this equipment.

Symbols on product

Be sure you understand their meaning before using this equipment.



Read all instructions



Eye protection must be worn at all times during the operation or maintenance of this tool.



Ear protection must be worn at all times during the operation or maintenance of this tool.



CE compliant

1 Safety:

WARNING!



Indicates a potentially **hazardous** situation for personal health and safety. If this warning is not observed, death or serious injury may occur.

CAUTION!



Indicates a potentially **hazardous** situation which, if not avoided, may result in minor or moderate injury or property and environmental damage.

Speed check

Using a tachometer, check the tool speed weekly or with every 200 hours of operation to assure it does not exceed the rated speed of the tool at 90 psig.

Personal protective equipment

WARNING!



Exercise caution, pay attention to what you are doing and act reasonably at all times when working with a pneumatic tool. **Never use a pneumatic tool while under the influence of drugs, alcohol or medication.** One moment of inattentiveness in the use of a pneumatic tool can cause serious injuries.

General Safety Instructions

Designated Use

This drill shall be used only for removing material by using appropriate drill bits as the cutting tool.

Do not modify the tool, any guard, or accessory unless approved in writing by Apex Tool Group, LLC.

WARNING!



Any abuse or misuse of this tool or the drill bit can be extremely dangerous. The drill bits used with this tool are not manufactured or supplied by Apex Tool Group, LLC. Consult and comply with the safety practices provided by the drill bit manufacturer.

Air Line Lubrication:

Part No.	Packaged	Designation
540397	1 Quart (0.94 liter)	Airlube 10W/NR-420LB DR
533485	1 US Gallon (3.78 liter)	Airlube 10W/NR-420LB DR

Air Supply Line:

Parameter	Description
Air Hose	Minimum inside diameter: 1/4" (6.35mm) Maximum length: 8.0' (2.4 m)
Working pressure range	Performance rated at: 90 psi (620 kPa)
Compressed air	Air quality according to ISO 8573-1, quality class 2.4.3 The compressed air must be clean and dry.

Disposal:



Observe local disposal guidelines for all components of this tool and its packaging.

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Zu dieser Bedienungsanleitung

Diese Bedienungsanleitung ist im Original in englischer Sprache verfasst. Diese Bedienungsanleitung richtet sich an alle Personen, die an der Bedienung und Wartung dieses Geräts beteiligt sind

Symbole auf dem Produkt

Bevor Sie das Produkt verwenden, müssen Sie die Bedeutung dieser Symbole verstanden haben.



Lesen Sie alle Anweisungen durch.



Bei der Benutzung oder Wartung dieses Werkzeugs muss stets Augenschutz getragen werden.



Bei der Benutzung oder Wartung dieses Werkzeugs muss stets Ohrschutz getragen werden.



CE-konform

1 Sicherheit

WARNUNG Weist auf eine mögliche **Gefahr** für die Gesundheit hin. Wird diese Warnung nicht beachtet, kann dies zum Tod oder schweren Verletzungen führen.



VORSICHT Weist auf eine mögliche **Gefahr** hin, die – falls nicht vermieden – zu leichten oder mittelschweren Verletzungen oder Sach- und Umweltschäden führen kann.



Drehzahlprüfung

Prüfen Sie die Drehzahl des Werkzeugs wöchentlich oder alle 200 Betriebsstunden mit einem Drehzahlmesser, um sicherzustellen, dass es bei 90 psig seine Nenndrehzahl nicht überschreitet.

Persönliche Schutzausrüstung

WARNUNG



Gehen Sie bei der Arbeit mit Druckluftwerkzeugen immer vorsichtig vor, achten Sie auf das, was Sie tun, und handeln Sie stets verantwortungsvoll. Verwenden Sie ein Druckluftwerkzeug niemals unter dem Einfluss von Drogen, Alkohol oder Medikamenten. Bei der Nutzung von Druckluftwerkzeugen kann ein kurzer Moment der Unaufmerksamkeit schwere Verletzungen zur Folge haben.

Allgemeine Sicherheitshinweise

Bestimmungsgemäßer Gebrauch

Diese Bohrmaschine darf nur zum Bohren mit geeigneten Bohrern bzw. Bohrwerkzeugen eingesetzt werden.

Nehmen Sie keine Änderungen an Werkzeug, Schutzvorrichtungen oder Zubehörteilen ohne schriftliche Genehmigung von Apex Tool Group, LLC vor.

WARNUNG



Jede Art von missbräuchlicher Verwendung oder Missbrauch dieses Werkzeugs kann extrem gefährlich sein. Die mit diesem Werkzeug verwendeten Schleifmittel werden nicht von Apex Tool Group, LLC hergestellt. Beachten und befolgen Sie die vom Schleifmittelhersteller vorgegebenen Sicherheitsmaßnahmen.

Schmierung der Druckluftleitung:

Teile-Nr.	Verpackt	Bezeichnung
540397	0,94 Liter	Airlube 10W/NR-420LB DR
533485	3,78 Liter	Airlube 10W/NR-420LB DR

Druckluftzufuhr:

Parameter	Beschreibung
Druckluftleitung	Min. Innendurchmesser: 1/4"(6,35mm) Max. Länge: 2,4 m
Arbeitsdruckbereich	Leistungseinstufung mit: 6,2 bar
Druckluft	Luftqualität gemäß ISO 8573-1, Qualitätsklasse 2.4.3 Die Druckluft muss sauber und trocken sein.

Entsorgung:



Bei der Entsorgung aller Komponenten dieses Werkzeugs und der Verpackung sind die vor Ort geltenden Entsorgungsvorschriften zu beachten.

Urheberschutz:

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À propos du présent manuel d'utilisation

La langue d'origine de ce manuel est l'anglais. Le présent manuel d'utilisation est destiné à toutes les personnes qui vont utiliser et entretenir ce matériel.

Pictogrammes apposés sur les produits

Assurez-vous de bien comprendre leur signification avant d'utiliser ce matériel.



Lire attentivement toutes les instructions.



Il est indispensable de porter des lunettes de protection pendant toute la durée d'opération et de maintenance de cet outil.



Il est essentiel de porter des protections auditives pendant toute la durée de l'opération et l'entretien de cet outil.



Conforme aux normes CE

1 Sécurité:

AVERTISSEMENT



Indique une situation potentiellement **dangereuse** pour la santé ou la sécurité des personnes. Le non-respect de cet avertissement peut entraîner des blessures extrêmement graves

ATTENTION



Situation potentiellement **nuisible** pour la santé des personnes ou pour le matériel et l'environnement.

Contrôle de la vitesse

À l'aide d'un tachymètre, vérifier la vitesse de l'outil chaque semaine ou toutes les 200 heures de service afin de s'assurer que la vitesse mesurée de l'outil est bien à la pression de 90 psig.

Équipement de protection personnel

AVERTISSEMENT



Soyez vigilant et attentif à ce que vous faites et agissez de manière raisonnable à tout moment lorsque vous travaillez avec un outil pneumatique. N'utilisez jamais d'outil pneumatique lorsque vous êtes sous l'emprise de drogues, d'alcool ou de médicaments. Un moment d'inattention dans l'utilisation d'un outil pneumatique peut provoquer des blessures graves.

Consignes générales de sécurité

Utilisation conforme

Cette perceuse ne doit être utilisée que pour l'enlèvement de matière à l'aide de forets appropriés utilisés comme outils de coupe.

Ne pas modifier l'outil, tout dispositif de protection ou accessoires, sauf approbation écrite par Apex Tool Group LLC.

AVERTISSEMENT



Tout excès ou mauvais usage de cet outil ou des abrasifs peut être extrêmement dangereux. Les abrasifs utilisés sur cet outil ne sont pas fabriqués ni fournis par Apex Tool Group, LLC. Lire attentivement et se conformer aux instructions de sécurité fournies par le fabricant d'abrasifs.

Lubrification des conduites d'air :

Réf.	Quantité emballée	Désignation
540397	1 grande bouteille (0,94 litre)	Airlube 10W/NR-420LB DR
533485	1 gallon US (3,78 litres)	Airlube 10W/NR-420LB DR

Conduite d'alimentation en air :

Paramètre	Description
Tuyau d'air	Diamètre intérieur minimal : 1/4" (6,35mm) Longueur maximale : 8,0' (2,4 m)
Plage de pression de fonctionnement	Performances nominales : 90 psi (6,2 bar)
Air comprimé	Qualité de l'air conforme à ISO 8573-1, classe de qualité 2.4.3 L'air comprimé doit être propre et sec.

Mise au rebut :



Respectez toutes les directives locales de mise au rebut pour tous les composants et l'emballage de cet outil.

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Sobre este manual de instrucciones

El idioma original de este manual de instrucciones es el inglés. Este manual de instrucciones está dirigido a todas las personas que manejan y realizan el mantenimiento de este equipo.

Símbolos en el producto

Asegúrese de haber comprendido su significado antes de utilizar este equipo.



Lea todas las instrucciones



Se debe utilizar en todo momento protección ocular durante el funcionamiento o el mantenimiento de esta herramienta.



Se debe utilizar en todo momento protección oído durante el funcionamiento o el mantenimiento de esta herramienta.



Conforme con CE

1 Seguridad:

ADVERTENCIA



Indica una situación potencialmente **peligrosa** para la salud de las personas. La inobservancia de esta advertencia puede conllevar lesiones muy graves e incluso mortales.

ATENCIÓN



Situación posiblemente **nociva** para la salud de las personas o daños materiales y medioambientales.

Comprobación de velocidad

Utilizando un tacómetro, compruebe la velocidad de la herramienta cada semana o cada 200 horas de funcionamiento para asegurarse de que no supere la velocidad nominal a 90 psig.

Equipo de protección personal

ADVERTENCIA



Tenga cuidado, preste atención a lo que esté haciendo y actúe de forma razonable en todo momento cuando utilice una herramienta neumática. No utilice nunca una herramienta neumática cuando se encuentre bajo los efectos de alguna droga, alcohol o medicamento. Una falta de atención momentánea durante la utilización de una herramienta neumática puede ocasionar lesiones graves.

Instrucciones generales de seguridad

Empleo conforme al uso previsto

Este taladro debe usarse exclusivamente con el fin de extraer material utilizando la broca como herramienta de corte.

No modifique la herramienta ni ninguna protección o accesorio, salvo en caso de contar con la aprobación expresa por escrito de Apex Tool Group LLC.

ADVERTENCIA



Cualquier uso abusivo o inadecuado de esta herramienta o de los abrasivos puede resultar extremadamente peligroso. Los abrasivos utilizados con esta herramienta no los fabrica ni suministra Apex Tool Group, LLC. Consulte y siga las prácticas de seguridad indicadas por el fabricante de los abrasivos.

Lubricación de la línea de aire:

Nº de parte	Envase	Designación
540397	1 cuarto de galón (0,94 litros)	Airlube 10W/NR-420LB DR
533485	1 galón de EE.UU. (3,78 litros)	Airlube 10W/NR-420LB DR

Línea de aire comprimido:

Parámetro	Descripción
Manguera de aire	Diámetro interno mínimo: 1/4" (6,35mm) Longitud máxima: 8 pies (2.4 m)
Rango de presiones de servicio	Rendimiento con: 90 libras/pulg ² (6.2 bar)
Aire comprimido	Calidad del aire según ISO 8573-1, clase de calidad 2.4.3 El aire comprimido debe estar limpio y seco.

Desecho:



Desechar los componentes y el embalaje de esta herramienta según las normas municipales vigentes.

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Para este manual de instruções

A língua original deste manual de instruções é o inglês. Este manual de instruções é direcionado a todas as pessoas que irão operar e fazer a manutenção deste equipamento.

Símbolos no produto

Assegure-se de compreender seu significado antes de usar este equipamento.



Leia todas as instruções



A proteção para os olhos deve ser usada durante todo o tempo de operação e manutenção desta ferramenta.



A proteção para os ouvidos deve ser usada durante todo o tempo de operação e manutenção desta ferramenta.



Segue normas CE

1 Segurança:

ATENÇÃO



Indica uma situação potencialmente **perigosa** para a saúde e a segurança. Se este aviso não for observado, morte ou lesões graves podem ocorrer.

CUIDADO



Indica uma situação potencialmente **perigosa** que, se não evitada, pode resultar em lesão de leve a moderada ou danos materiais ou ambientais.

Controle da velocidade

Utilizando um tacômetro, checar a velocidade da ferramenta semanalmente ou a cada 200 horas de operação para assegurar que a velocidade nominal de 90 psig não é ultrapassada.

Equipamento de proteção pessoal

ATENÇÃO



É necessário ser cauteloso, prestar atenção no que está fazendo e agir com sensatez em todos os momentos ao trabalhar com uma ferramenta elétrica. Jamais usar uma ferramenta pneumática sob influência de drogas, álcool ou medicamentos. Um momento de desatenção ao usar uma ferramenta pneumática pode causar sérias lesões.

Instruções gerais de segurança

Utilização conforme a destinação

Este berbequim só deve ser usado para remover material, mediante o uso de brocas apropriadas como ferramentas de corte.

Não modificar a ferramenta, qualquer proteção ou acessório, exceto se aprovado por escrito pela Apex Tool Group LLC.

ATENÇÃO



Qualquer abuso ou mau uso dessa ferramenta ou do abrasivo pode ser extremamente perigoso. Os abrasivos utilizados com esta ferramenta não são manufaturados ou fornecidos pela Apex Tool Group, LLC. Consulte e siga as práticas de segurança fornecidas pelo fabricante do abrasivo.

Lubrificação dos dutos de ar:

Peça Nº.	Tamanho da embalagem	Designação
540397	0,94 Litros (1/4 galão US)	Airlube 10W/NR-420LB DR
533485	3,78 Litros (1 galão US)	Airlube 10W/NR-420LB DR

Duto de suprimento de ar:

Parâmetro	Descrição
Mangueira de ar	Diâmetro interno mínimo: 6,35 mm (1/4") Comprimento máximo: 2,4 m (8,0 pés)
Gama da pressão de trabalho	Desempenho classificado em: 6,2 bar (90 psi)
Ar comprimido	Qualidade do ar de acordo com ISO 8573-1, qualidade de classe 2.4.3 O ar comprimido tem que estar limpo e seco.

Descarte:



Siga todas as directivas locais de descarte para todos os componentes desta ferramenta e sua embalagem.

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Per le presenti Istruzioni d'uso

La lingua originale delle presenti istruzioni per l'uso è l'inglese. Il presente manuale di istruzioni è destinato a tutto il personale che si occupa dell'utilizzo e della manutenzione di questo equipaggiamento

Simboli sul prodotto

Accertarsi di aver compreso il significato di questi simboli prima di usare l'attrezzatura.



Leggere tutte le istruzioni



Indossare sempre le protezioni per gli occhi mentre l'utensile è in funzione o durante gli interventi di manutenzione.



Indossare sempre le protezioni per gli orecchi mentre l'utensile è in funzione o durante gli interventi di manutenzione.



Conformità CE

1 Sicurezza:

AVVERTENZA



Indica una situazione potenzialmente **pericolosa** per la salute e la sicurezza delle persone. Se questo avvertimento non viene rispettato, si possono verificare lesioni gravi o mortali.

ATTENZIONE



Indica una situazione potenzialmente **pericolosa** che, se non evitata, può comportare lesioni di lieve o moderata entità, oppure provocare danni materiali e ambientali.

Controllo della velocità

Mediante un tachimetro, controllare ogni settimana o ogni 200 ore di esercizio la velocità dell'utensile, per assicurarsi che non superi la velocità nominale utensile di 90 psig.

Dispositivi di protezione individuale

AVVERTENZA



Procedere con cautela, prestare attenzione a quello che si sta facendo e agire in modo ragionevole in qualunque momento si stia utilizzando un utensile pneumatico. Non utilizzare mai un utensile pneumatico qualora ci si trovi sotto l'influenza di droghe, alcool, o farmaci. Un momento di distrazione durante l'uso di un utensile pneumatico può causare lesioni gravi.

Istruzioni generali di sicurezza

Uso conforme

Questo trapano deve essere usato esclusivamente per la rimozione di materiale per mezzo di punte adeguate che vengono usate come strumenti da taglio.

Non modificare l'utensile, eventuali protezioni o accessori salvo autorizzazione scritta da parte di Apex Tool Group, LLC.

AVVERTENZA



Qualsiasi abuso o uso scorretto del presente utensile o abrasivo può risultare estremamente pericoloso. L'abrasivo utilizzato con questo utensile non viene prodotto, né fornito da Apex Tool Group, LLC. Consultare e conformarsi alle procedure di sicurezza fornite dal produttore dell'abrasivo.

Lubrificazione del condotto dell'aria:

Articolo n.	Imballato	Designazione
540397	1 qt (0,94 litri)	Airlube 10W/NR-420LB DR
533485	1 gallone (3,78 litri)	Airlube 10W/NR-420LB DR

Condotta di alimentazione dell'aria:

Parametro	Descrizione
Tubo aria	Diametro interno minimo: 1/4" (6,35mm) Lunghezza massima: 8,0' (2,4 m)
Intervallo pressione di esercizio	Indice di prestazione a: 90 psi (6,2 bar)
Aria compressa	Qualità aria ai sensi della norma ISO 8573-1, classe qualità 2.4.3 L'aria compressa deve essere pulita e secca.

Smaltimento:



Per quanto riguarda i componenti del presente utensile e i loro imballaggi, seguire le linee guida locali in materia di smaltimento.

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有关本说明手册

本说明手册的原始语言为英语。本说明手册供操作和维护本设备的所有人员使用。

产品上的符号

使用本设备之前，确保您理解这些符号的含义。



阅读所有说明



在操作或维护本工具期间必须始终佩戴护目装置。



工具的操作或维护期间始终佩戴护耳设备。



通过CE认证

1 安全性

警告



指示会为人身安全和健康带来潜在危险的情况。如果忽视此警告，可能导致最严重的人身伤害。

小心



对人员健康或财产和环境可能有损害的状况。

转速检查

使用转速表每周或每隔200工作小时执行工具转速检查，确认其在90 psig供气压力下未超出工具额定转速。

个人防护装备

警告



使用气动工具工作时，应始终小心谨慎，注意自己正在做的事，并合理地操作。切勿在受到毒品、酒精或药物影响的情况下使用气动工具。使用气动工具时片刻的不专注也可能导致严重伤害。

一般安全说明

指定用途

这种便携式钻机只能用于通过使用适当的钻头作为切削刀具来去除材料。

除非获得Apex Tool Group, LLC的书面批准，否则不得对本工具、任何防护装置或附件进行改装。

警告



任何滥用或误用本工具或磨具的行为都是极度危险的。配合本工具使用的磨具并非由Apex Tool Group, LLC制造或供应。请参阅并遵守磨具制造商提供的安全守则。

供气管润滑:

部件号	已打包	说明
540397	1 夸脱 (0.94 升)	Airlube 10W/NR-420LB DR
533485	1 美制加仑 (3.78 升)	Airlube 10W/NR-420LB DR

空气供应管:

参数	描述
空气软管	最小内径: 1/4" (6.35mm) 最大长度: 8.0' (2.4 m)
工作压力范围	额定性能: 90 psi (6.2 bar)
压缩空气	空气质量依据为 ISO 8573-1, 质量等级为 2.4.3 压缩空气必须洁净、干燥。

处置:



遵守当地关于此工具所有组件及其包装的处置方针。

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製造者:

Apex Tool Group, LLC
670 Industrial Drive
Lexington, South Carolina 29072, USA

輸入者:

Apex Tool Group GmbH
Industriestraße 1
D-73463 Westhausen, Germany

このマニュアルについて

このマニュアルの原文は英語です。このマニュアルは本製品の操作および保守を行うすべての人を対象とします。

製品上に表示される記号

本製品を使用する前に意味を確認してください。



すべての指示事項を読んでください。



この工具の操作または保守を行う際には必ず保護眼鏡を着用してください。



この工具の操作または保守を行う際には必ずイヤーマフを着用してください。



CE 適合

1 安全:

警告



人の健康・安全に危険を及ぼす可能性のある状況を示します。この警告に従わないと死亡または重傷事故のおそれがあります。

注意



軽傷または中程度の負傷あるいは物損・環境を損傷する危険がある状況を示します。

速度チェック

タコメータを用いて工具の回転速度を毎週、または使用 200 時間ごとにチェックし、90 psig での定格速度を超えていないことを確認してください。

個人用保護具

警告



空圧工具使用中は常に自身の動作に注意を向け、適切に行動してください。薬物、アルコールまたは医薬品の影響が残っている状態で空圧工具を使用してはなりません。空圧工具使用中の一瞬の不注意が重傷につながる可能性があります。

安全上の一般的注意事項

所定用途

このポータブルドリルは、適切なドリルビットを切削工具として使用して材料を除去するためにのみ使用しなければなりません。

→ Apex Tool Group, LLC の書面による許諾なく工具、ガード、アクセサリを改造することを禁じます。

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空気管潤滑油:

部品番号	梱包	出荷先
540397	0.94 リットル	Airlube 10W/NR-420LB DR
533485	3.78 リットル	Airlube 10W/NR-420LB DR

エアサプライ管:

パラメータ	説明
エアホース	最小内径: 6.35mm 最大長: 2.4 m
作業圧力範囲	性能定格: 90 psi (6.2 bar)
圧搾空気	ISO 8573-1による空気質、質クラス2.4.3 圧搾空気は清潔で乾燥している必要があります。

廃棄方法:



本ツールのすべての部品およびその梱包は、お住まいの地域の廃棄ガイドラインに従ってください。

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사용 설명서 관련 정보

본 사용 설명서는 원래 영어로 작성되었습니다. 본 사용 설명서는 제품을 사용하고 유지보수하는 모든 사람을 대상으로 작성되었습니다.

제품상의 기호

제품을 사용하기 전에 다음 기호의 의미를 이해하고 숙지하시기 바랍니다.



모든 지침을 읽고 숙지하십시오.



이 공구를 사용하거나 유지보수하는 중에는 항상 안전경을 착용해야 합니다.



유지 보수 또는 이 도구를 사용하는 동안, 당신은 항상 귀 보호를 착용해야 합니다.



CE 규정 준수

1 안전:



경고 건강과 안전에 잠재적으로 위험한 상황을 나타냅니다. 이 경고를 준수하지 않으면 심각한 부상을 당하거나 사망에 이를 수 있습니다.



주의 피하지 않으면 경미한 부상이나 재산 및 환경 피해를 일으킬 수 있는 잠재적으로 위험한 상황을 나타냅니다.

속도 점검

속도계를 사용해 90 psig의 공구 정격 속도를 초과하지 않도록 매주 또는 200시간 작동 후마다 공구 속도를 점검하십시오.

개인 보호 장비

경고



공업 공구를 사용할 때는 항상 현재 작업에 집중하고 합리적으로 행동하십시오. 절대로 술이나 약을 복용한 상태로 공업 공구를 사용하지 마십시오. 공업 공구를 사용할 때는 한 순간의 부주의가 심각한 부상으로 이어질 수 있습니다.

일반 안전 지침

용도

이 휴대용 드릴은 절삭 공구로 적절한 드릴 비트를 사용하여 재료를 제거하는 데만 사용해야 합니다.

Apex Tool Group LLC의 서면 승인 없이 공구, 가드 또는 액세서리를 개조하지 마십시오.

경고



이 공구나 연마재를 오용 또는 남용하면 매우 위험한 상황에 처할 수 있습니다. 이 공구와 함께 사용하는 연마재는 Apex Tool Group, LLC에서 제조 또는 공급하지 않습니다. 연마재 제조사에서 제공하는 안전 지침을 확인하고 준수하십시오.

공기선 유통제:

부품 번호	포장	지정
540397	1쿼트 (0.94리터)	공기유통유 10W/NR-420LB DR
533485	1 미국 갤런 (3.78리터)	공기유통유 10W/NR-420LB DR

공기 공급선:

파라미터	설명
에어 호스	최소 내부 직경: 1/4" (6.35mm) 최대 길이 8.0' (2.4 m)
조작 압력 범위	성능 등급: 90 psi (620 kPa)
압축 공기	ISO 8573-1, quality class 2.4.3에 의거한 공기 품질 압축 공기는 반드시 깨끗하고 건조한 공기여야 합니다.

폐기:



이 공구와 패키징의 모든 구성품에 대해서는 현재의 폐기 가이드라인을 준수하십시오.

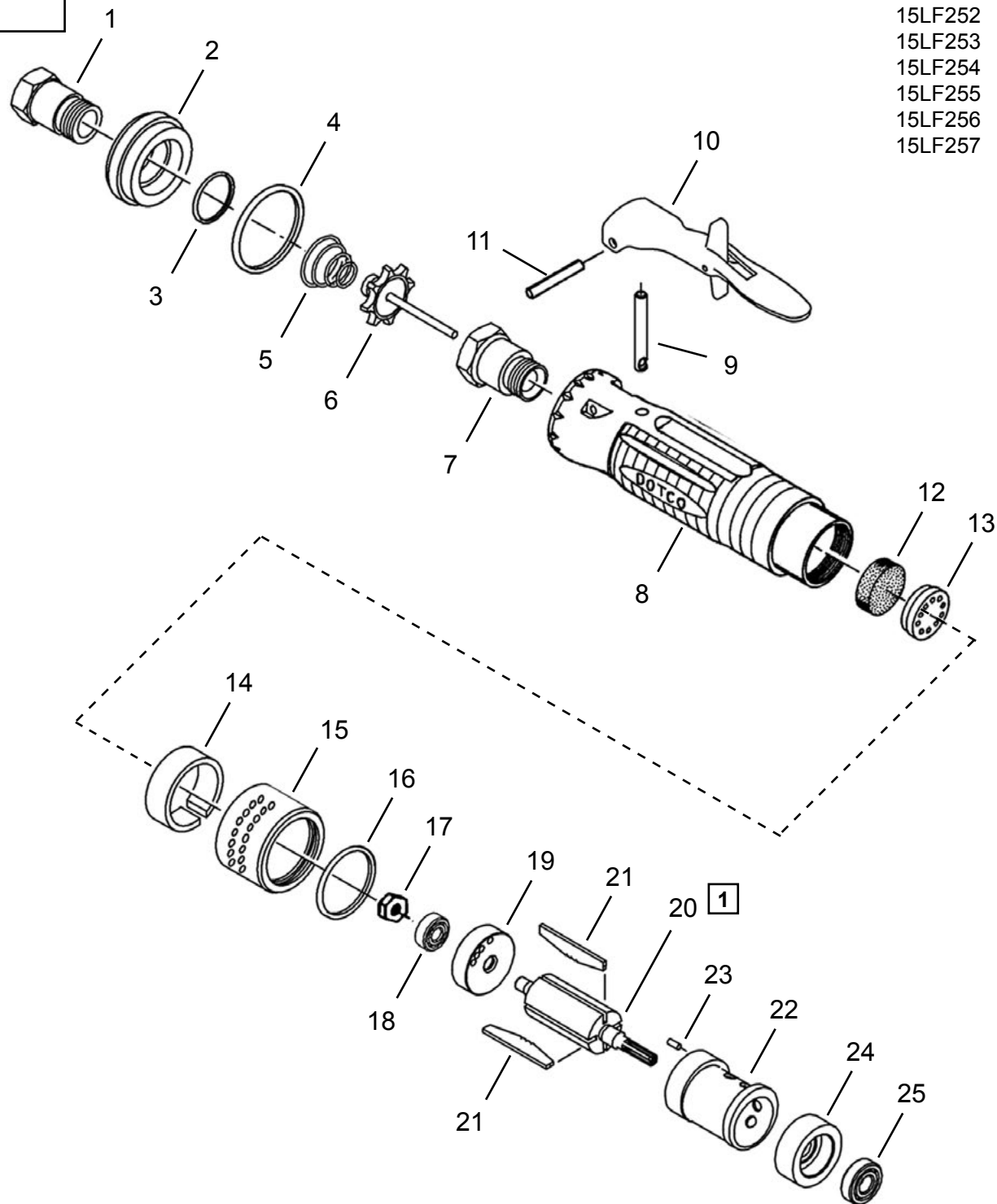
저작권 보호:

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"A"

Models

15LF251
15LF252
15LF253
15LF254
15LF255
15LF256
15LF257



1 See Service Notes

Illustration "A"

Ref	Number	#	X	EN
				Description
1	01-2505	1	1	Air Inlet Adapter (1/4" NPT)
2	01-2506	1		Exhaust Plug
3	2965	1	3	O-Ring
4	3036PT	1	3	O-Ring
5	01-2519	1	3	Valve Spring
6	01-2518	1		Valve
7	01-2504	1		Valve Seat
8	01-1065	1		Motor Housing
9	01-1017	1		Push Rod
10	01-1267	1	1	Locking Lever Assembly
11	1042	1	1	Lever Pin
12	01-1046	1	3	Filter
13	01-1061	1		Filter Retainer
14	01-1066	1	3	Felt Muffler
15	01-1062	1		Muffler Body
16	2301PT	1	3	O-Ring
--	Table "A"	1		Motor Assembly (includes Ref. 17-25)
17	1012215	1	3	Rotor Nut
18	1009879	1	2	Ball Bearing
19	1110072	1		Rear Bearing Plate
20	Table "A"	1		Rotor
21	1008914	4	12	Rotor Blade
22	1017579	1		Cylinder (includes Ref. 23)
23	1017422	1	2	Cylinder Locating Pin
24	1008916	1		Front Bearing Plate
25	1007537	1	2	Ball Bearing

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "A"

Ref.	Description	#	15LF251 15LF255	#	15LF252 15LF256	#	15LF253 15LF257	#	15LF254
--	Motor Assembly	1	1025550	1	1025554	1	1025552	1	1025556
20	Rotor	1	1015872	1	1017518	1	1017517	1	1017516

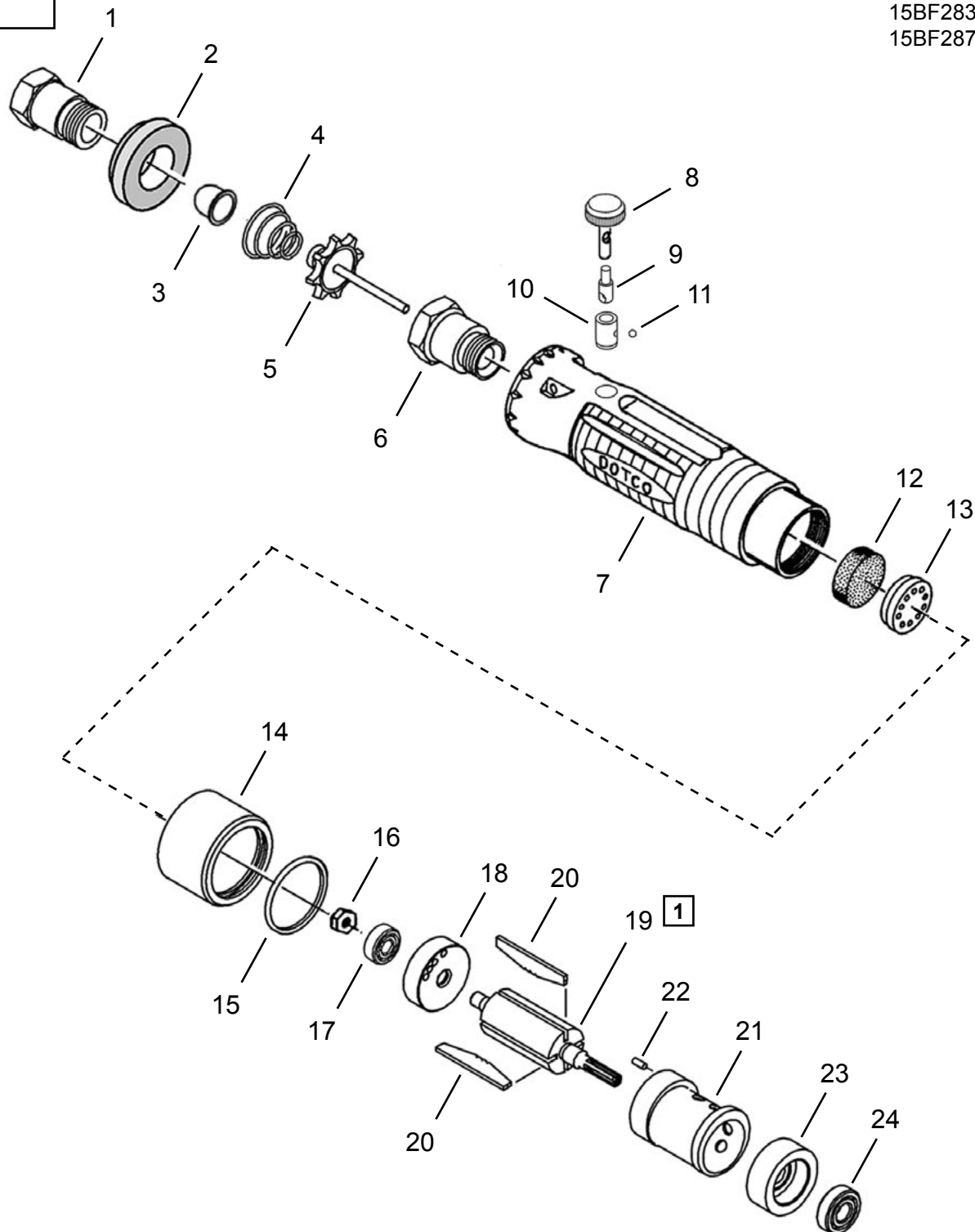
"B"

Models

15BF282

15BF283

15BF287



1 See Service Notes

Illustration "B"

Ref	Number	#	X	EN
				Description
1	01-2505	1	1	Air Inlet Adapter (1/4" NPT)
2	01-2520	1		Diffuser
3	203480PT	1	3	Air Strainer
4	01-2519	1	3	Valve Spring
5	01-2518	1		Valve
6	01-2504	1		Valve Seat
7	01-1001P	1		Motor Housing
8	01-1109	1		Throttle Button
9	01-1108	1		Push Rod
10	01-1107	1		Bushing
11	01-1106	1	3	Steel Ball
12	01-1046	1	3	Filter
13	01-1061	1		Filter Retainer
14	01-1063	1		Muffler
15	2301PT	1	3	O-Ring
--	Table "B"	1		Motor Assembly (includes Ref. 16-24)
16	1012215	1	3	Rotor Nut
17	1009879	1	2	Ball Bearing
18	1110072	1		Rear Bearing Plate
19	Table "B"	1		Rotor
20	1008914	4	12	Rotor Blade
21	1017579	1		Cylinder (includes Ref. 22)
22	1017422	1	2	Cylinder Locating Pin
23	1008916	1		Front Bearing Plate
24	1007537	1	2	Ball Bearing

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "B"

Ref.	Description	#	15BF282	#	15BF283 15BF287
--	Motor Assembly	1	1025554	1	1025552
19	Rotor	1	1017518	1	1017517

"C"
Models

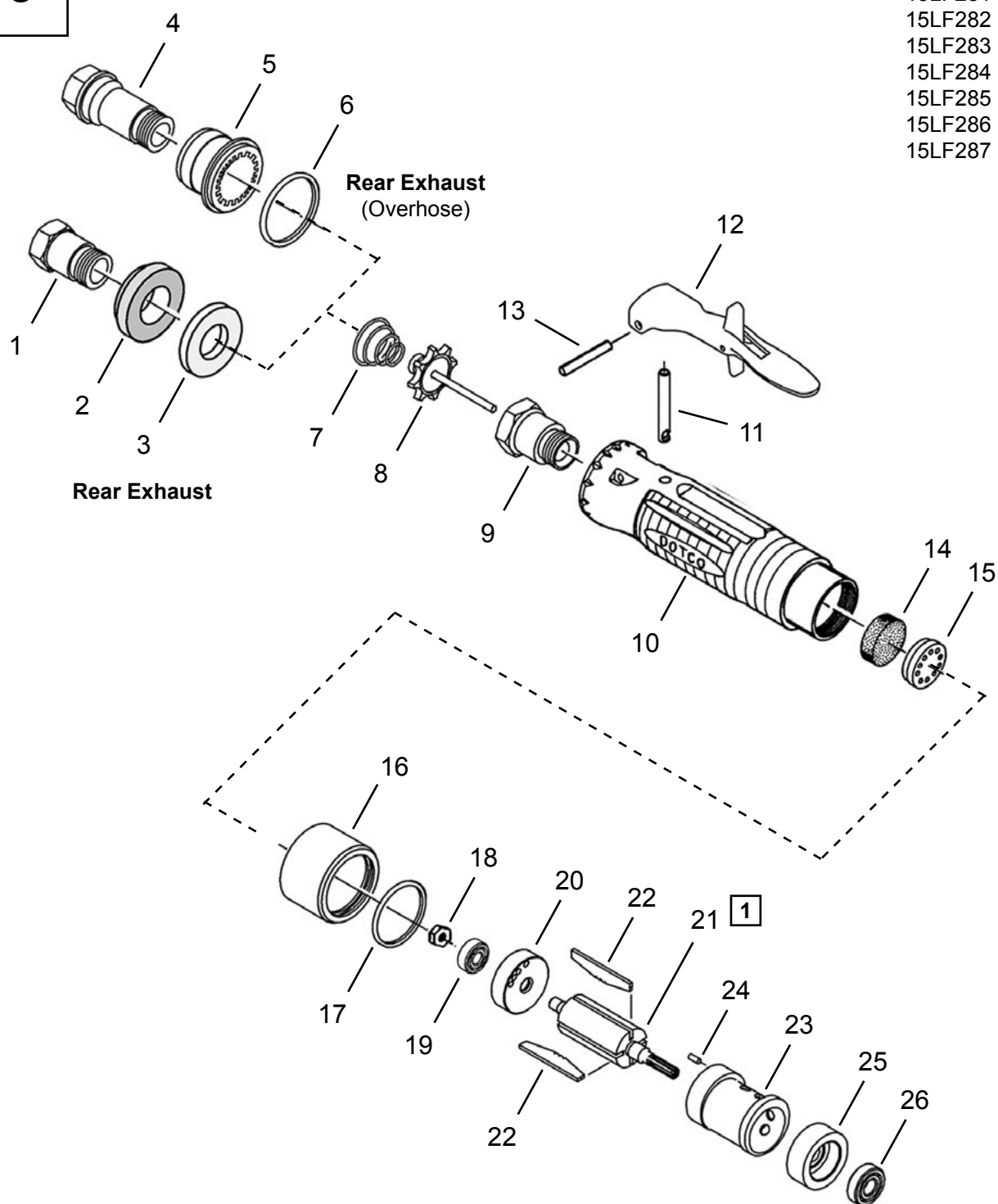
 15LF281
 15LF282
 15LF283
 15LF284
 15LF285
 15LF286
 15LF287

1 See Service Notes

Illustration "C"

Ref	Number	#	X	EN
				Description
1	01-2505	1	1	Air Inlet Adapter (1/4" NPT)
2	01-2520	1		Diffuser
3	1110134	1	3	Muffler
4	01-1031	1		Air Inlet Adapter (Overhose)
5	01-1032	1		Muffler (Overhose)
6	3036PT	1	3	O-Ring (Overhose)
7	01-2519	1	3	Valve Spring
8	01-2518	1		Valve
9	01-2504	1		Valve Seat
10	01-1065	1		Motor Housing
11	01-1017	1		Push Rod
12	01-1267	1	1	Locking Lever Assembly
13	1042	1	1	Lever Pin
14	01-1046	1	3	Filter
15	01-1061	1		Filter Retainer
16	01-1063	1		Muffler
17	2301PT	1	3	O-Ring
--	Table "C"	1		Motor Assembly (includes Ref. 18-26)
18	1012215	1	3	Rotor Nut
19	1009879	1	2	Ball Bearing
20	1110072	1		Rear Bearing Plate
21	Table "C"	1		Rotor
22	1008914	4	12	Rotor Blade
23	1017579	1		Cylinder (includes Ref. 24)
24	1017422	1	2	Cylinder Locating Pin
25	1008916	1		Front Bearing Plate
26	1007537	1	2	Ball Bearing

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "C"

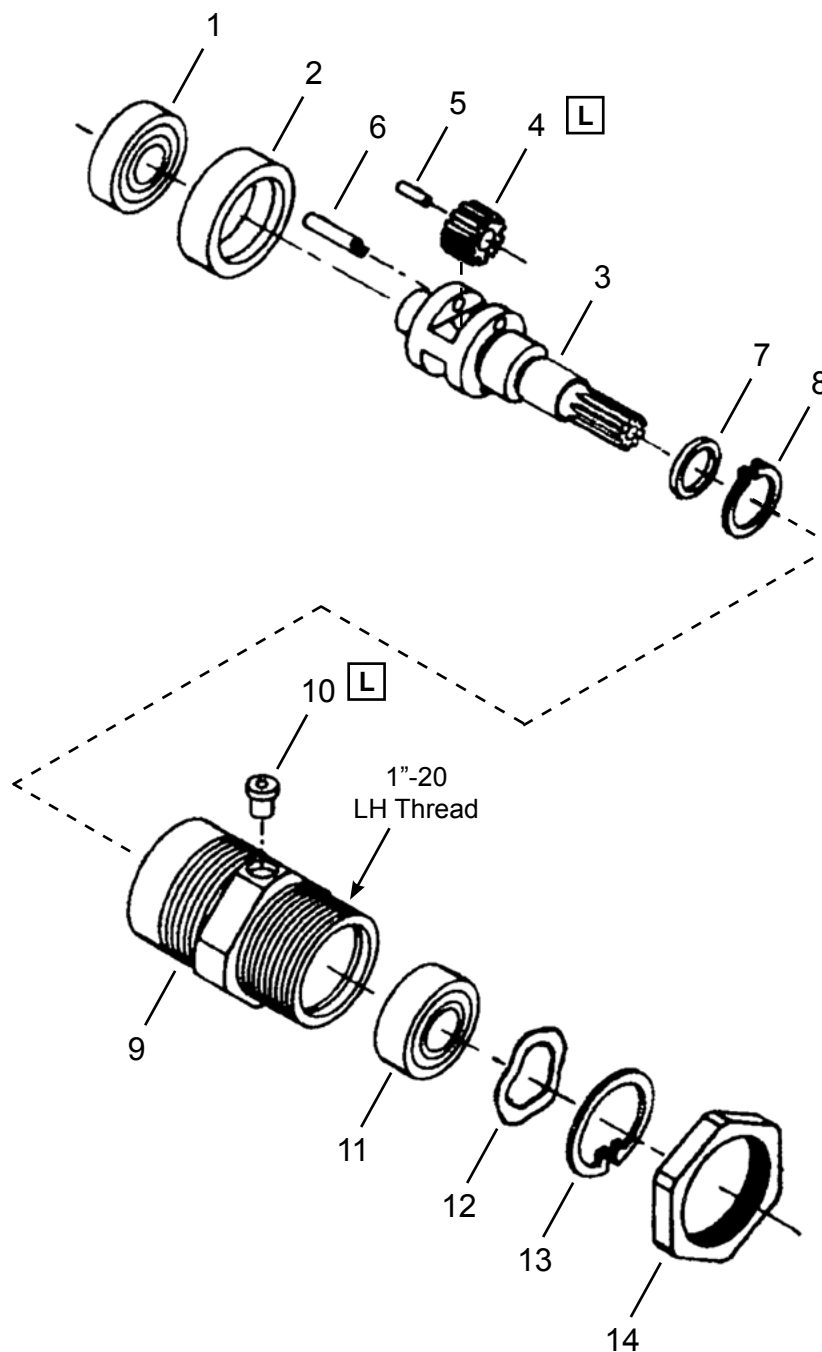
Ref.	Description	#	15LF281 15LF285	#	15LF282 15LF286	#	15LF283 15LF287	#	15LF284
--	Motor Assembly	1	1025550	1	1025554	1	1025552	1	1025556
21	Rotor	1	1015872	1	1017518	1	1017517	1	1017516

"D"

Speed Codes: 1, 2, 3

Models

15LF251	15BF283
15LF252	15LF281
15LF253	15LF282
	15LF283



Grease:

540395: Magnalube-G, 2 oz. (0.06 kg)
513156: Magnalube-G, 16 oz. (0.45 kg)

Illustration "D"

Ref	Number	#	X	EN
				Description
--	Table "D"	1		Gearing Assembly (includes Ref. 1-13)
1	1005062	1	2	Ball Bearing
2	Table "D"	1		Bearing Adapter
3	Table "D"	1		Planetary Gear Cage
4	Table "D"	2	4	Planetary Gear
5	1008924	24	48	Planetary Gear Roller
6	1008920	2	4	Planetary Gear Pin
7	Table "D"	1		Planetary Gear Cage Washer
8	1010099	1	1	Retaining Ring
9	Table "D"	1		Gear Housing (includes Ref. 10)
10	1463PT	1		Grease Fitting
11	1008854	1	2	Ball Bearing
12	1110127	1	2	Wave Washer
13	1008859	1	1	Retaining Ring
14	1110065	1		Lock Nut

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "D"

Ref.	Description	#	15LF251 15LF281	#	15LF252 15LF282	#	15BF283 15LF253 15LF283
--	Gearing Assembly	1	1025650	1	1025651	1	1025652
2	Bearing Adapter		-----		-----	1	1008921
3	Planetary Gear Cage	1	1110223	1	1110225	1	1110224
4	Planetary Gear	2	1008973 (14T)	2	1008968 (17T)	2	1008919 (19T)
7	Planetary Cage Washer	1	1110054	1	1110055	1	1110056
9	Gear Housing	1	1110046	1	1110047	1	1110048

(T) Teeth

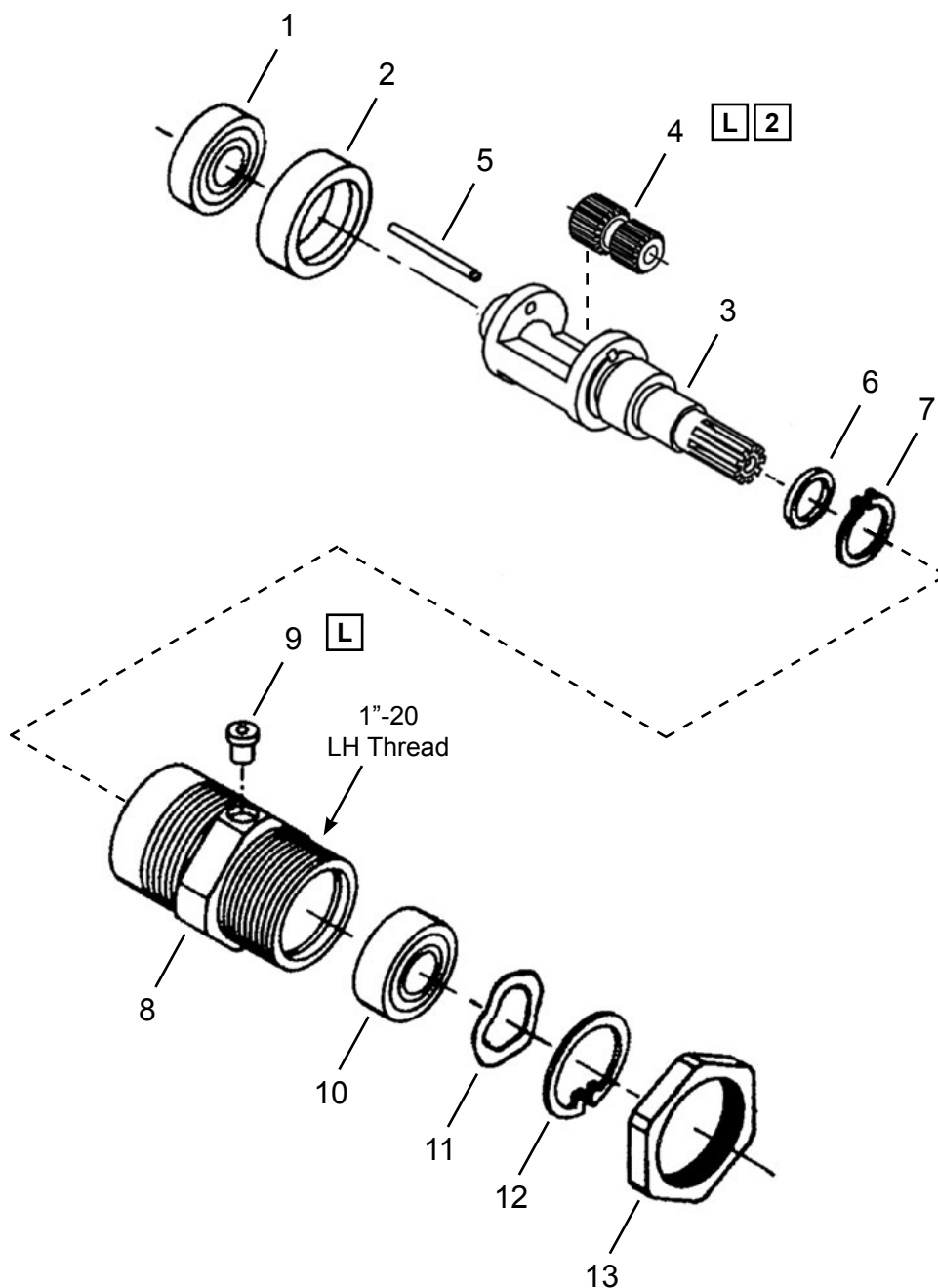
"E"

Speed Code: 4

Models

15LF254

15LF284



2 See Service Notes

L Grease:
540395: Magnalube-G, 2 oz. (0.06 kg)
513156: Magnalube-G, 16 oz. (0.45 kg)

Illustration "E"

Ref	Number	#	X	EN
				Description
--	1025653	1		Gearing Assembly (includes Ref. 1-12)
1	1005062	1	2	Ball Bearing
2	1008921	1		Bearing Adapter
3	1110233	1		Planetary Gear Cage
4	1008978	2	4	Planetary Gear
5	1008977	2	4	Planetary Gear Pin
6	1110055	1		Planetary Gear Cage Washer
7	1010099	1	1	Retaining Ring
8	1110049	1		Gear Housing (includes Ref. 9)
9	1463PT	1		Grease Fitting
10	1008854	1	2	Ball Bearing
11	1110127	1	1	Wave Washer
12	1008859	1	1	Retaining Ring
13	1110065	1		Lock Nut

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

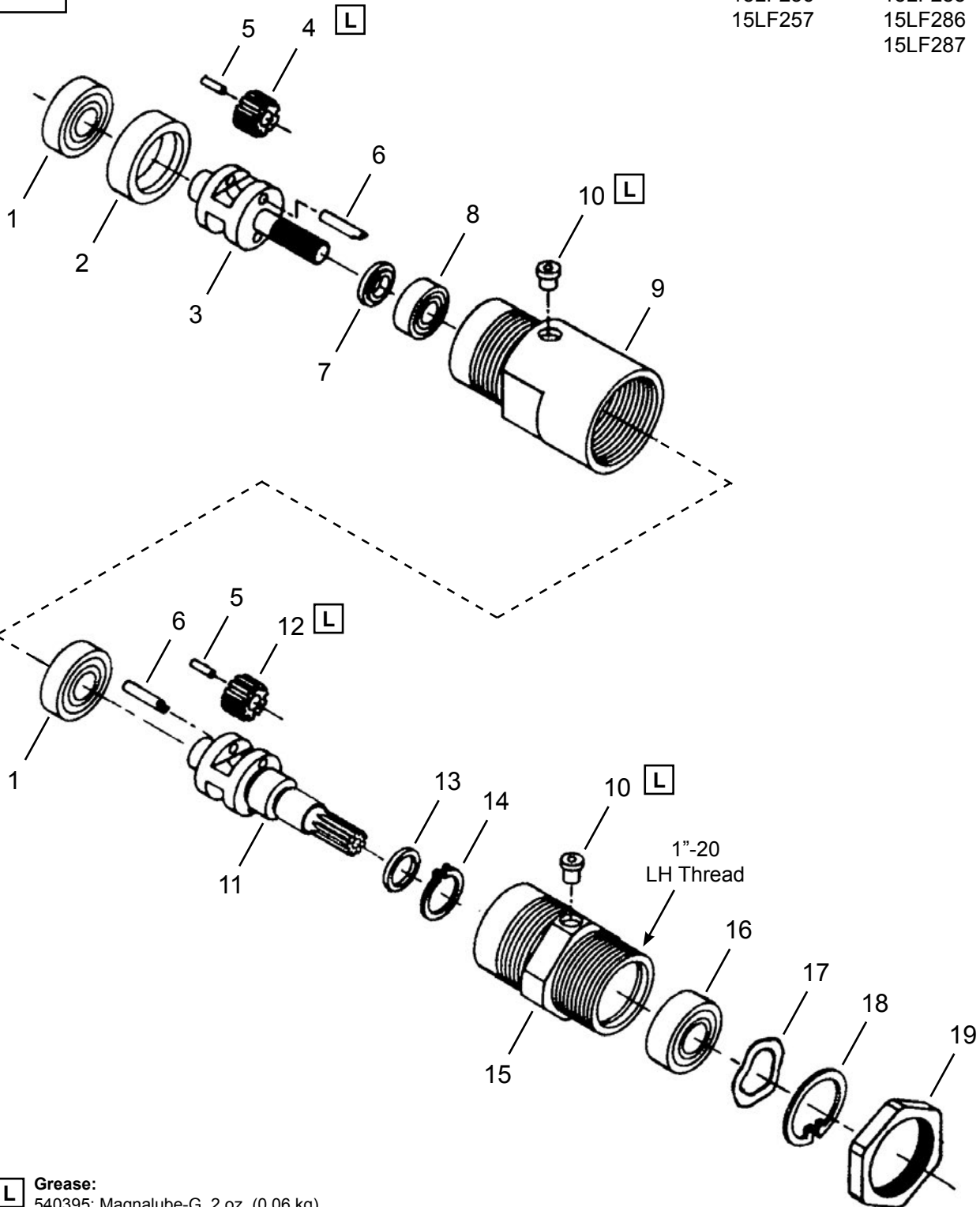
"F"

Speed Codes: 5, 6, 7

Models

15LF255
15LF256
15LF257

15BF287
15LF285
15LF286
15LF287



L Grease:
540395: Magnalube-G, 2 oz. (0.06 kg)
513156: Magnalube-G, 16 oz. (0.45 kg)

Illustration "F"

Ref	Number	#	X	EN
				Description
--	Table "F"	1		Primary Gearing Assembly (includes Ref. 1-10: 1 (qty.1), 5 (qty.24), 6 (qty. 2)
1	1005062	2	4	Ball Bearing
2	Table "F"	1		Bearing Adapter
3	Table "F"	1		Planetary Gear Cage
4	Table "F"	2	4	Primary Planetary Gear
5	1008924	48	96	Planetary Gear Roller
6	1008920	4	8	Planetary Gear Pin
7	Table "F"	1	1	Planetary Gear Cage Washer
8	1007537	1	2	Ball Bearing
9	Table "F"	1		Gear Housing (includes Ref. 10, qty. 1)
10	1463PT	2		Grease Fitting
--	1025650	1		Output Gearing Assembly (includes Ref. 11-18: 1 (qty.1), 5 (qty.24), 6 (qty.2)
11	1110233	1		Output Planetary Gear Cage
12	1008973	2	4	Output Planetary Gear (14T)
13	1110054	1	1	Output Planetary Gear Cage Washer
14	1010099	1	1	Retaining Ring
15	1110046	1		Output Gear Housing (includes 1 Ref. 10)
16	1008854	1	2	Ball Bearing
17	1110127	1	1	Wave Washer
18	1008859	1	1	Retaining Ring
19	1110065	1		Lock Nut

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

(T) Teeth

Table "F"

Ref.	Description	#	15LF255 15LF285	#	15LF256 15LF286	#	15BF287 15LF257 15LF287
--	Primary Gear Assembly	1	1025247	1	1025180	1	1025250
2	Bearing Adapter		-----		-----	1	1009681
3	Planetary Gear Cage	1	1008985	1	1009679	1	1009681
4	Primary Planetary Gear	2	1008973 (14T)	2	1008968 (17T)	2	1008919 (19T)
7	Planetary Gear Cage Washer	1	1008986	1	1009680	1	1009682
9	Primary Gear Housing	1	1019146	1	1019147	1	1019148

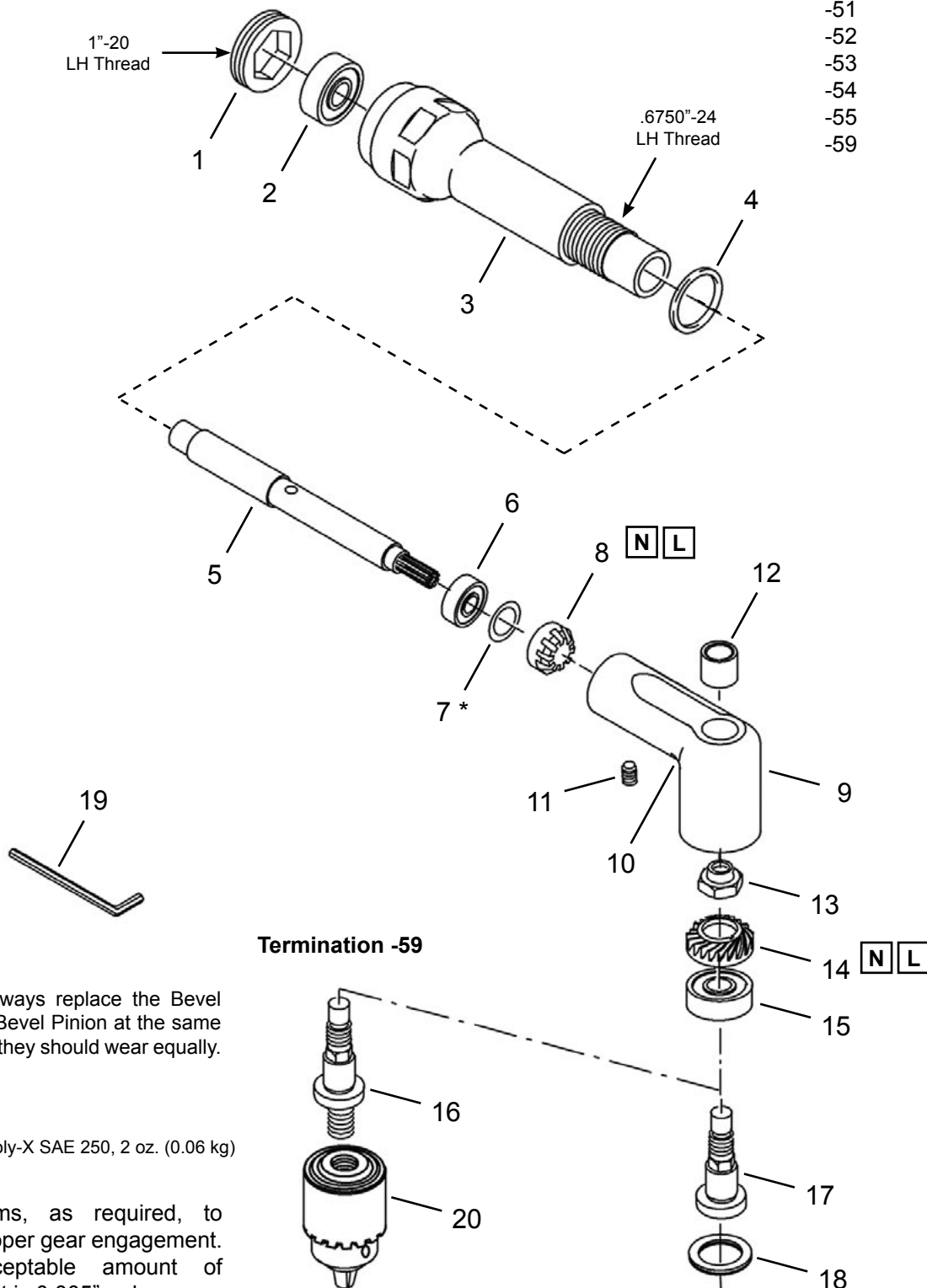
(T) Teeth

Dotco®
90° Heavy Duty Angle Head

"G"

**Angle Head
Terminations**

-51
-52
-53
-54
-55
-59



[N]

NOTE: Always replace the Bevel Gear and Bevel Pinion at the same time since they should wear equally.

[L]

Grease:
45-0980: Moly-X SAE 250, 2 oz. (0.06 kg)

*** NOTE:**

Use shims, as required, to obtain proper gear engagement. The acceptable amount of movement is 0.005" or less.

Illustration "G"

Ref	Number	#	X	EN
				Description
--	Table "G"	1		Heavy Duty Angle Head Assembly (Includes Ref. 1-19)
1	1006205	1		Retaining Nut
2	1005062	1	2	Ball Bearing
3	1009242	1		Housing
4	1008680	1	3	O-Ring
5	1009643	1		Spindle Extension
6	1007537	1	2	Ball Bearing
7	1008748	AR		Shim (0.002")
	1013224	AR		Shim (0.005")
8	1009255	1	1	Bevel Pinion
9	1008853	1		Angle Housing (includes Ref. 10)
10	1463PT	1	1	Grease Fitting
11	1008345	1	2	Set Screw
12	Table "G"	1	2	Needle Bearing
13	1008849	1	2	Spindle Nut
14	1009095	1	1	Bevel Gear
15	1008854	1	2	Ball Bearing
16	Table "G"	1		Output Spindle (Male Thread)
17	Table "G"	1		Output Spindle (Internal Thread)
18	Table "G"	1	2	Retaining Ring
19	1008860	1	1	Hex Key Wrench
20	1005078	1	1	1/4" Capacity Drill Chuck (Includes Ref. 21) (Termination -59)
21	1005079	1	1	Drill Chuck Key (not shown)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

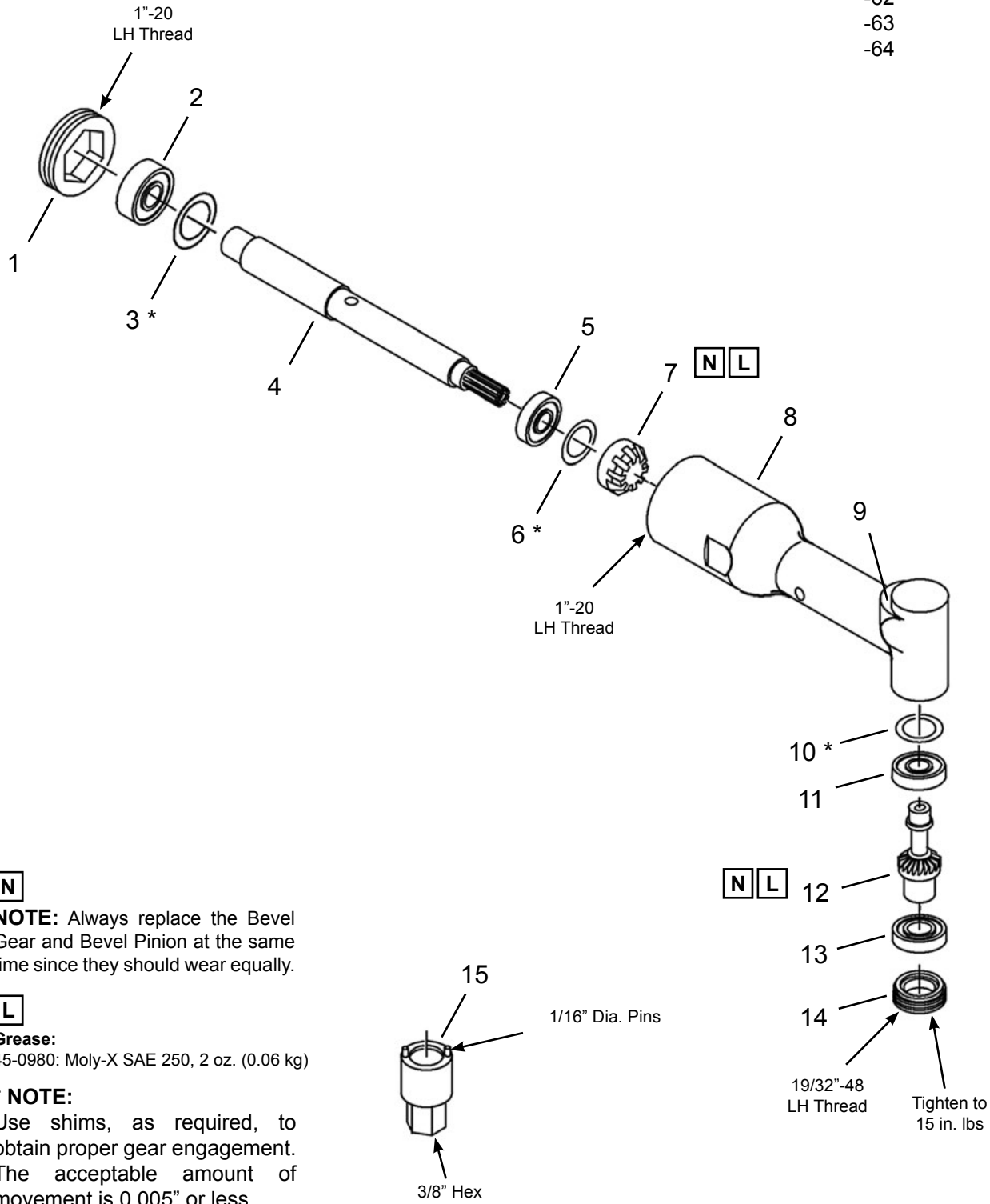
Table "G"

Ref.	Description	90° Heavy Duty Angle Attachments											
		#	1025547	#	1021289	#	1021292	#	1021291	#	1025780	#	1021620
--	Termination Code		-51		-52		-53		-54		-55		-59
--	Spindle Thread (Internal)		#10-32		1/4"-28		9/32"-40		5/16"-24		3/8"-24		-----
--	Spindle Thread (External)		-----		-----		-----		-----		-----		3/8"-24
12	Needle Bearing	1	382253	1	382253	1	382253	1	382253	1	382253	1	1008929
16	Output Spindle (External)		-----		-----		-----		-----		-----	1	1015703
17	Output Spindle (Internal)	1	1110062	1	1008850	1	1008948	1	1008856	1	1017662		-----
18	Retaining Ring	1	1008859	1	1008859	1	1008859	1	1008859	1	1008859		-----

"H"

**Angle Head
Terminations**

-61
-62
-63
-64



N

NOTE: Always replace the Bevel Gear and Bevel Pinion at the same time since they should wear equally.

L

Grease:
45-0980: Moly-X SAE 250, 2 oz. (0.06 kg)

*** NOTE:**

Use shims, as required, to obtain proper gear engagement. The acceptable amount of movement is 0.005" or less.

Illustration "H"

Ref	Number	#	X	EN
				Description
--	Table "H"	1		90° Miniature Angle Head Assembly (Includes Ref. 1-14)
1	1006205	1		Retaining Nut
2	1009087	1	2	Ball Bearing
3	1016150	AR		Shim (0.002")
	1016151	AR		Shim (0.005")
	1013432	AR		Shim (0.008")
4	1009643	1		Extension Spindle
5	1019559	2	4	Ball Bearing
6	1008748	AR		Shim (0.002")
	1013224	AR		Shim (0.005")
7	1019555	1	1	Bevel Gear
8	1019556	1		90° Angle Housing (Includes Ref.9)
9	1463PT	1	1	Grease Fitting
10	1006265	AR		Shim (0.002")
	1006266	AR		Shim (0.003")
	1006267	AR		Shim (0.005")
11	1019559	1	2	Ball Bearing
12	Table "H"	1		Output Spindle
13	1019560	1	2	Ball Bearing
14	1019569	1		Bearing Cap
15	1019759	1	1	Spanner Wrench (not included with angle attachment)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "H"

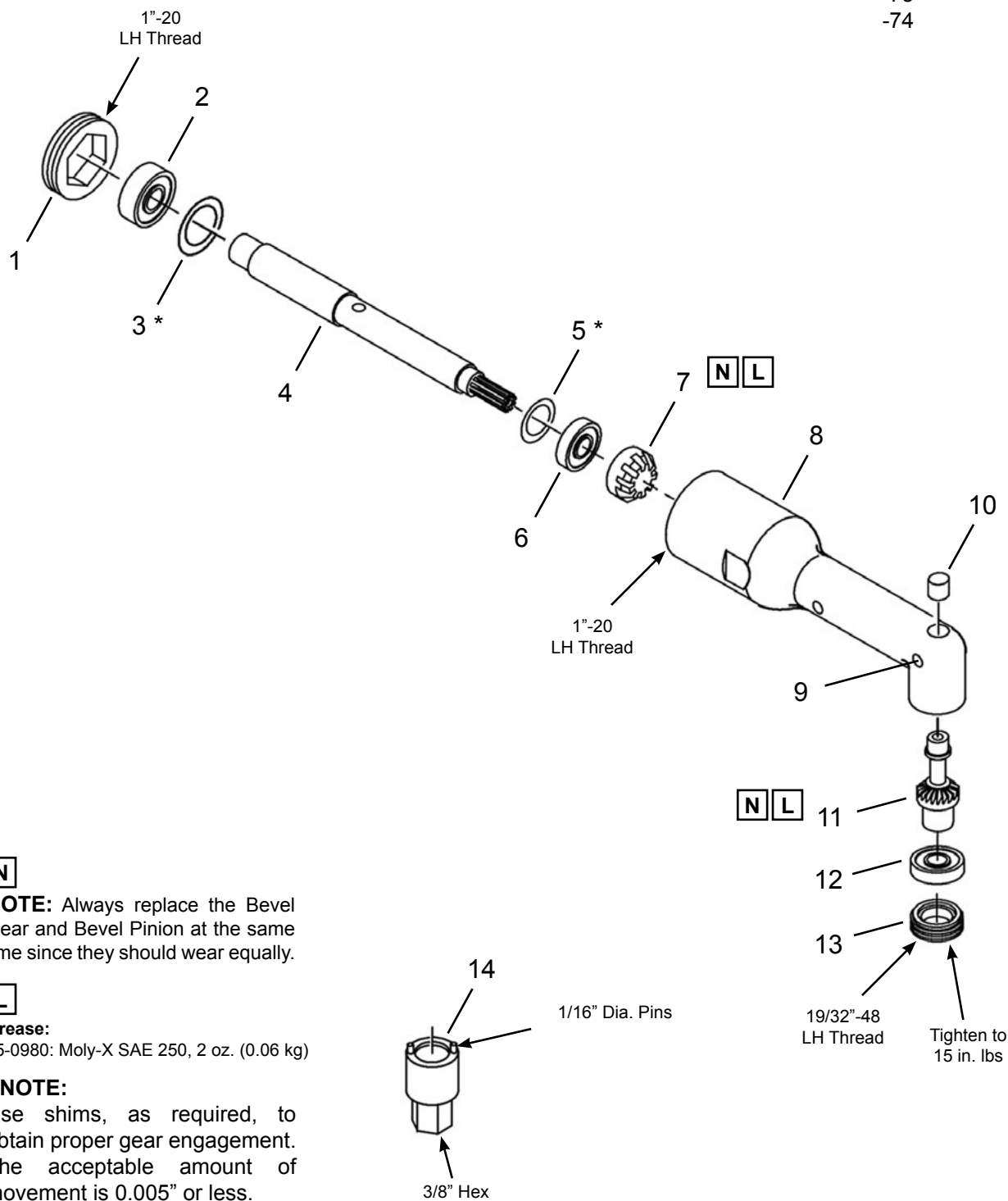
Ref.	Description	90° Mini Angle Attachments							
		#	1025314	#	1025409	#	1025313	#	1025328
--	Termination Code		-61		-62		-63		-64
--	Spindle Thread (Internal)		#10-32		1/4"-28		9/32"-40		5/16"-24
12	Output Spindle (Internal)	1	1019553	1	1019551	1	1019552	1	1019554

Dotco®
90° Compact Angle Head

"I"

**Angle Head
Terminations**

-71
-72
-73
-74



[N]

NOTE: Always replace the Bevel Gear and Bevel Pinion at the same time since they should wear equally.

[L]

Grease:
45-0980: Moly-X SAE 250, 2 oz. (0.06 kg)

*** NOTE:**

Use shims, as required, to obtain proper gear engagement. The acceptable amount of movement is 0.005" or less.

Illustration "I"

Ref	Number	#	X	EN
				Description
--	Table "I"	1		90° Compact Angle Head Assembly (Includes Ref. 1-13)
1	1006205	1		Retaining Nut
2	1009087	1	2	Ball Bearing
3	1016150	AR		Shim (0.002")
	1016151	AR		Shim (0.005")
	1013432	AR		Shim (0.008")
4	1009643	1		Extension Spindle
5	1008748	AR		Shim (0.002")
	1013224	AR		Shim (0.005")
6	1019559	1	2	Ball Bearing
7	1019555	1	1	Bevel Gear
8	1019758	1		90° Angle Housing (includes Ref. 9)
9	1463PT	1	1	Grease Fitting
10	1011597	1	2	Bushing
11	Table "I"	1		Output Spindle
12	1019560	1	2	Ball Bearing
13	1019569	1		Bearing Cap
14	1019759	1	1	Spanner Wrench (not included with angle attachment)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

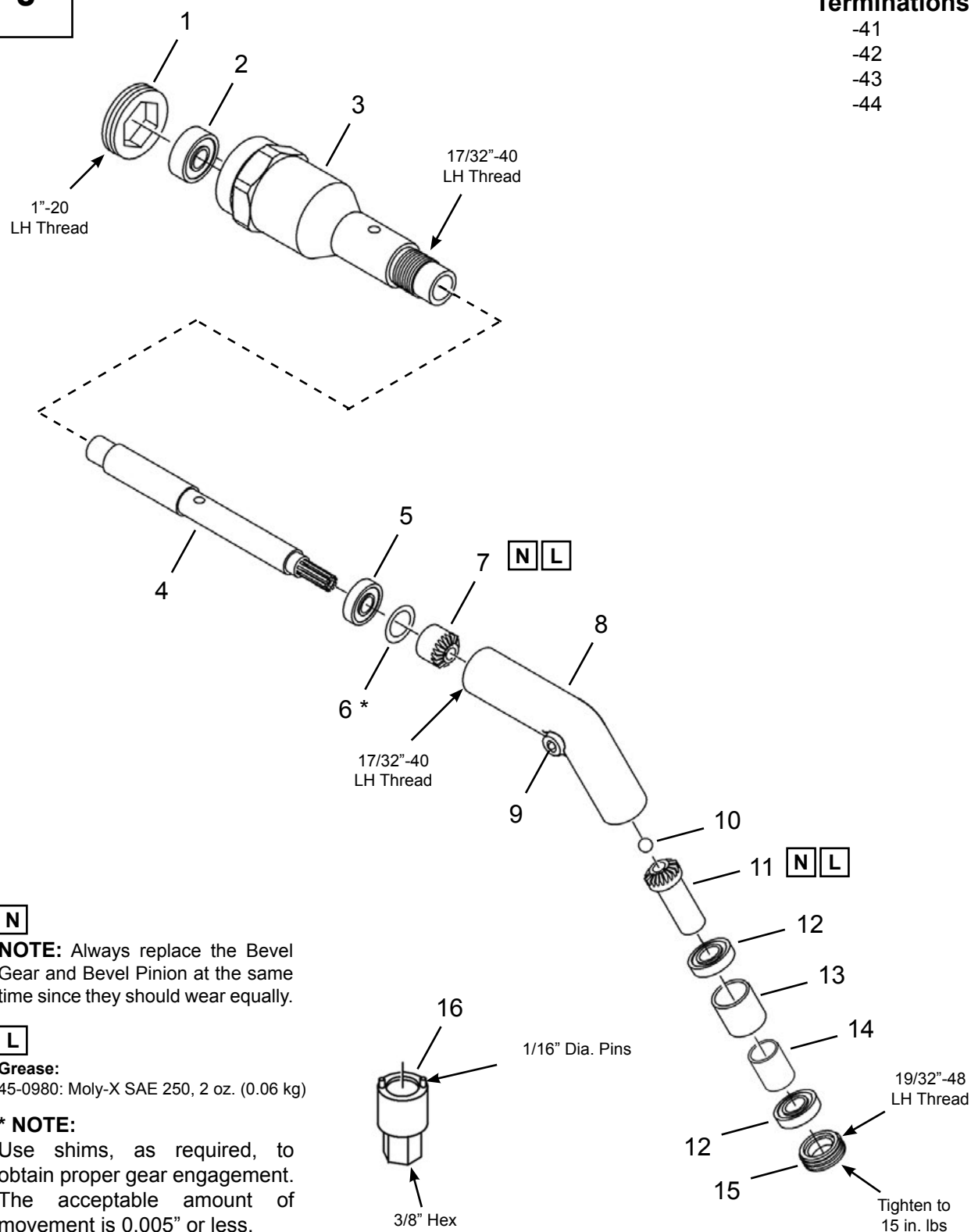
Table "I"

Ref.	Description	90° Compact Angle Attachments							
		#	1025667	#	1025477	#	1025476	#	1025668
--	Termination Code		-71		-72		-73		-74
--	Spindle Thread (Internal)		#10-32		1/4"-28		9/32"-40		5/16"-24
11	Output Spindle (Internal)	1	1110261	1	1019879	1	1019880	1	1110262

“J”

Angle Head Terminations

-41
-42
-43
-44



N

NOTE: Always replace the Bevel Gear and Bevel Pinion at the same time since they should wear equally.

L

Grease:
45-0980: Moly-X SAE 250, 2 oz. (0.06 kg)

*** NOTE:**

Use shims, as required, to obtain proper gear engagement. The acceptable amount of movement is 0.005" or less.

Illustration "J"

Ref	Number	#	X	EN
				Description
--	Table "J"	1		45° Mini Angle Head Assembly (Includes Ref. 1-15)
1	1006205	1		Retaining Nut
2	1009087	1	2	Ball Bearing
3	1110405	1		Housing
4	1009643	1		Spindle Extension
5	1019559	1	2	Ball Bearing
6	1008748	AR		Shim (0.002")
	1013224	AR		Shim (0.005")
	1013432	AR		Shim (0.008")
7	1110353	1	1	Bevel Pinion
8	1110406	1		45° Angle Housing (Includes Ref. 9)
9	1463PT	1	1	Grease Fitting
10	1005823	1	3	Steel Ball (7/32")
11	Table "J"	1		Output Spindle
12	1019560	2	4	Ball Bearing
13	1110354	1		Spacer
14	02-1750	1		Spacer
15	1019569	1		Bearing Cap
16	1019759	1	1	Spanner Wrench (not included with angle attachment)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "J"

Ref.	Description	45° Mini Angle Attachments							
		#	1025732	#	1025730	#	1025731	#	1025733
--	Termination Code		-41		-42		-43		-44
--	Spindle Thread (Internal)		#10-32		1/4"-28		9/32"-40		5/16"-24
11	Output Spindle (Internal)	1	1110351	1	1110349	1	1110350	1	1110352



Illustration "K"

Ref	Number	#	X	EN
				Description
--	Table "K"	1		360° Mini Angle Head Assembly (Includes Ref. 1-19)
1	1006205	1		Retaining Nut
2	1009087	1	2	Ball Bearing
3	1016150	AR		Shim (0.002")
	1016151	AR		Shim (0.005")
	1013432	AR		Shim (0.008")
4	1009643	1		Spindle Extension
5	1019559	4	8	Ball Bearing
6	1008748	AR		Shim (0.002")
	1013224	AR		Shim (0.005")
7	1019555	2	2	Bevel Gear
8	1019556	1		Housing (includes 1 Ref. 9)
9	1463PT	2	2	Grease Fitting
10	1006265	AR		Shim (0.002")
	1006266	AR		Shim (0.003")
	1006267	AR		Shim (0.005")
11	1019551	1	1	Output Spindle
12	1019560	2	4	Ball Bearing
13	1110332	1		Retaining Nut
14	1110333	1		Clamp (includes Ref. 15)
15	2140PT	2	4	Screw
16	1110331	1		Spindle Extension
17	1110330	1		360° Angle Housing (includes 1 Ref. 9)
18	Table "K"	1		Output Spindle
19	1019569	1		Bearing Cap
20	1019759	1	1	Spanner Wrench (not included with angle attachment)

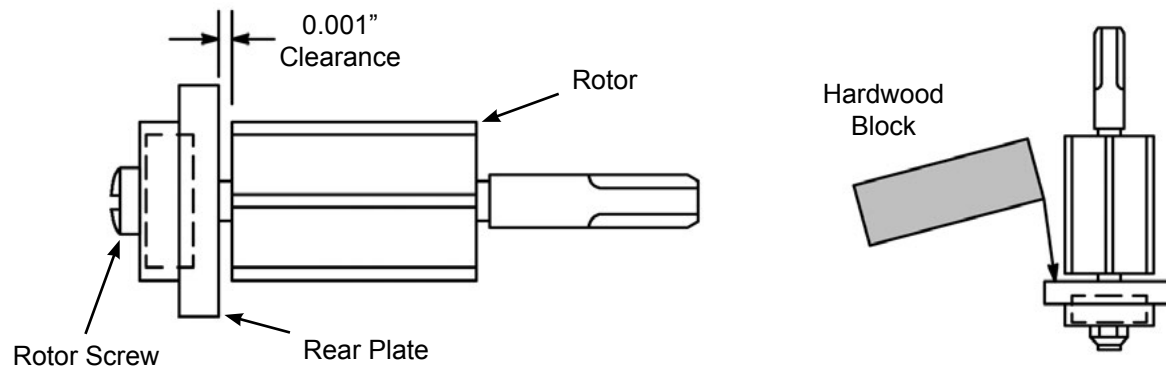
(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

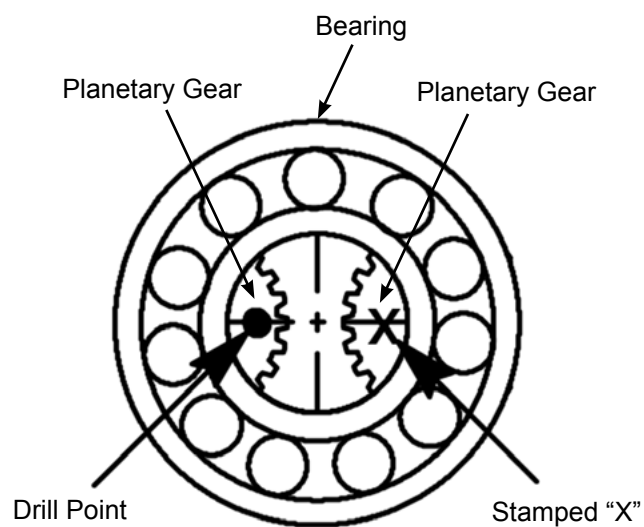
Table "K"

Ref.	Description	360° Mini Angle Attachments							
		#	1025696	#	1025694	#	1025695	#	1025697
--	Termination Code		-91		-92		-93		-94
--	Spindle Thread (Internal)		#10-32		1/4"-28		9/32"-40		5/16"-24
18	Output Spindle (Internal)	1	1019553	1	1019551	1	1019552	1	1019554

1 Motor Assembly



2 Planetary Gear Timing: Speed Code 4



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