

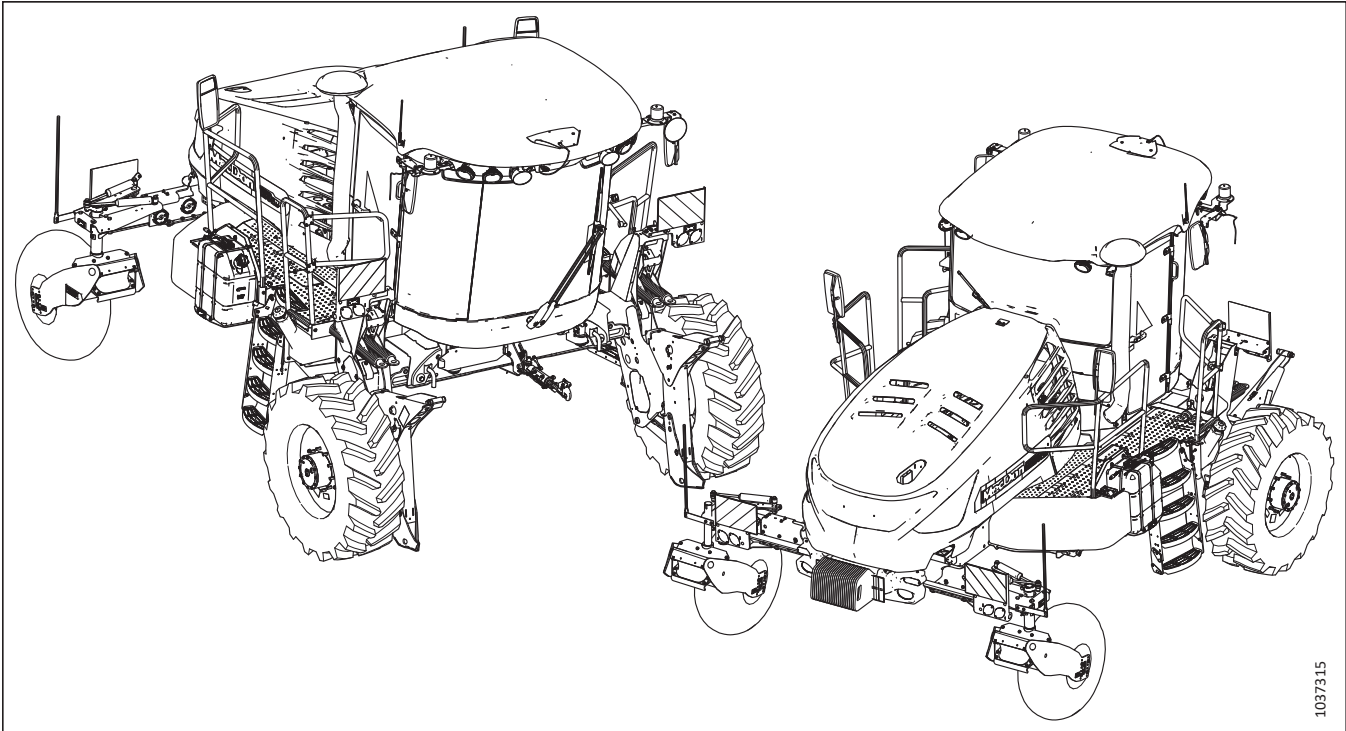
# **M1170NT5 (Narrow Transport) Windrower**

Unloading and Assembly Instructions (Container Shipments)

215634 Revision B

Original Instruction

M1170N75 Windrowers, featuring Dual Direction® and CrossFlex™ rear suspension



Published January 2022

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# EC Declaration of Conformity—Windrower Lift Sling

		<h2>EC Declaration of Conformity</h2>	
<p>[1] <b>MacDon</b></p> <p>MacDon Industries Ltd. 680 Moray Street, Winnipeg, Manitoba, Canada R3J 3S3</p>		<p>[4] Not Applicable</p>	
<p>[2] Windrower Lift Sling</p>		<p>[5] October 29, 2021</p>	
<p>[3] Part 306489</p>		<p>[6] _____ Adrienne Tankeu Product Integrity</p>	

EN	BG	CZ	DA
<p>We, [1]</p> <p>Declare, that the product:</p> <p>Machine Type: [2]</p> <p>Name &amp; Model: [3]</p> <p>Serial Number(s): [4]</p> <p>fulfils all the relevant provisions of the Directive 2006/42/EC.</p> <p>Harmonized standards used, as referred to in Article 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Place and date of declaration: [5]</p> <p>Identity and signature of the person empowered to draw up the declaration: [6]</p> <p>Name and address of the person authorized to compile the technical file:</p> <p>Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germany) bvonriedesel@macdon.com</p>	<p>Ние, [1]</p> <p>декларираме, че следният продукт:</p> <p>Тип машина: [2]</p> <p>Наименование и модел: [3]</p> <p>Сериен номер(а) [4]</p> <p>отговаря на всички приложими разпоредби на директива 2006/42/ЕО.</p> <p>Използвани са следните хармонизирани стандарти според чл. 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Място и дата на декларацията: [5]</p> <p>Име и подпис на лицето, упълномощено да изготви декларацията: [6]</p> <p>Име и адрес на лицето, упълномощено да състави техническия файл:</p> <p>Бенедикт фон Рийдесел Управител, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Германия) bvonriedesel@macdon.com</p>	<p>My, [1]</p> <p>Prohlašujeme, že produkt:</p> <p>Typ zařízení: [2]</p> <p>Název a model: [3]</p> <p>Sériové(á) číslo(a): [4]</p> <p>spĺňuje všechna relevantní ustanovení směrnice 2006/42/EC.</p> <p>Byly použity harmonizované standardy, jak je uvedeno v článku 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Místo a datum prohlášení: [5]</p> <p>Identita a podpis osoby oprávněné k vydání prohlášení: [6]</p> <p>Jméno a adresa osoby oprávněné k vyplnění technického souboru:</p> <p>Benedikt von Riedesel generální ředitel, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Německo) bvonriedesel@macdon.com</p>	<p>Vi, [1]</p> <p>erklærer, at produktet:</p> <p>Maskintype [2]</p> <p>Navn og model: [3]</p> <p>Serienummer (-numre): [4]</p> <p>Opfylder alle bestemmelser i direktiv 2006/42/EF.</p> <p>Anvendte harmoniserede standarder, som henviser til i paragraf 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Sted og dato for erklæringen: [5]</p> <p>Identitet på og underskrift fra den person, som er bemyndiget til at udarbejde erklæringen: [6]</p> <p>Navn og adresse på den person, som er bemyndiget til at udarbejde den tekniske fil:</p> <p>Benedikt von Riedesel Direktør, MacDon Europe GmbH Hagenauer Straße 59 D-65203 Wiesbaden (Tyskland) bvonriedesel@macdon.com</p>

DE	ES	ET	FR
<p>Wir, [1]</p> <p>Erklären hiermit, dass das Produkt:</p> <p>Maschinentyp: [2]</p> <p>Name &amp; Modell: [3]</p> <p>Seriennummer (n): [4]</p> <p>alle relevanten Vorschriften der Richtlinie 2006/42/EG erfüllt.</p> <p>Harmonisierte Standards wurden, wie in folgenden Artikeln angegeben, verwendet 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Ort und Datum der Erklärung: [5]</p> <p>Name und Unterschrift der Person, die dazu befugt ist, die Erklärung auszustellen: [6]</p> <p>Name und Anschrift der Person, die dazu berechtigt ist, die technischen Unterlagen zu erstellen:</p> <p>Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden bvonriedesel@macdon.com</p>	<p>Nosotros [1]</p> <p>declaramos que el producto:</p> <p>Tipo de máquina: [2]</p> <p>Nombre y modelo: [3]</p> <p>Números de serie: [4]</p> <p>cumple con todas las disposiciones pertinentes de la directriz 2006/42/EC.</p> <p>Se utilizaron normas armonizadas, según lo dispuesto en el artículo 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Lugar y fecha de la declaración: [5]</p> <p>Identidad y firma de la persona facultada para draw redactar la declaración: [6]</p> <p>Nombre y dirección de la persona autorizada para elaborar el expediente técnico:</p> <p>Benedikt von Riedesel Gerente general - MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Alemania) bvonriedesel@macdon.com</p>	<p>Meie, [1]</p> <p>deklareerime, et toode</p> <p>Seadme tüüp: [2]</p> <p>Nimi ja mudel: [3]</p> <p>Seerianumbrid: [4]</p> <p>vastab kõigile direktiivi 2006/42/EÜ asjakohastele sätetele.</p> <p>Kasutatud on järgnevald harmoniseeritud standard- ardeid, millele on viidatud ka punktis 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklaratsiooni koht ja kuupäev: [5]</p> <p>Deklaratsiooni koostamiseks volitatud isiku nimi ja allkiri: [6]</p> <p>Tehnilise dokumendi koostamiseks volitatud isiku nimi ja aadress:</p> <p>Benedikt von Riedesel Peadirektor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Saksamaa) bvonriedesel@macdon.com</p>	<p>Nous soussignés, [1]</p> <p>Déclarons que le produit :</p> <p>Type de machine : [2]</p> <p>Nom et modèle : [3]</p> <p>Numéro(s) de série : [4]</p> <p>Est conforme à toutes les dispositions pertinentes de la directive 2006/42/EC.</p> <p>Utilisation des normes harmonisées, comme indiqué dans l'Article 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Lieu et date de la déclaration : [5]</p> <p>Identité et signature de la personne ayant reçu le pouvoir de rédiger cette déclaration : [6]</p> <p>Nom et adresse de la personne autorisée à consti- tuer le dossier technique :</p> <p>Benedikt von Riedesel Directeur général, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Allemagne) bvonriedesel@macdon.com</p>

The Harvesting Specialists

MacDon

1037610

# EC Declaration of Conformity

<p>IT</p> <p>Noi, [1] Dichiariamo che il prodotto: Tipo di macchina: [2] Nome e modello: [3] Numero(i) di serie: [4] soddisfa tutte le disposizioni rilevanti della direttiva 2006/42/CE.</p> <p>Utilizzo degli standard armonizzati, come indicato nell'Articolo 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Luogo e data della dichiarazione: [5] Nome e firma della persona autorizzata a redigere la dichiarazione: [6] Nome e persona autorizzata a compilare il file tecnico: Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germania) bvonriedesel@macdon.com</p>	<p>HU</p> <p>Mi, [1] Ezennel kijelentjük, hogy a következő termék: Gép típusa: [2] Név és modell: [3] Számszám(ok): [4] teljesíti a következő irányelv összes vonatkozó előírásait: 2006/42/EK.</p> <p>Az alábbi harmonizált szabványok kerültek alkalmazásra a 7(2) cikkely szerint:</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>A nyilatkozattétel ideje és helye: [5] Azon személy kiléte és aláírása, aki jogosult a nyilatkozat elkészítésére: [6] Azon személy neve és aláírása, aki felhatalmazott a műszaki dokumentáció összeállítására: Benedikt von Riedesel Vezérigazgató, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Németország) bvonriedesel@macdon.com</p>	<p>LT</p> <p>Mes, [1] Pareiškiam, kad šis produktas: Mašinos tipas: [2] Pavadinimas ir modelis: [3] Serijos numeris (-iai): [4] atitinka taikomus reikalavimus pagal Direktyvą 2006/42/EB.</p> <p>Naudojami harmonizuoti standartai, kai nurodoma straipsnyje 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklaracijos vieta ir data: [5] Asmens tapatybės duomenys ir parašas asmens, įgalioto sudaryti šią deklaraciją: [6] Vardas ir pavardė asmens, kuris įgaliotas sudaryti šį techninį failą: Benedikt von Riedesel Generalinis direktorius, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Vokietija) bvonriedesel@macdon.com</p>	<p>LV</p> <p>Mēs, [1] Deklarējam, ka produkts: Mašinas tips: [2] Nosaukums un modelis: [3] Sērijas numurs(-i): [4] Atbilst visām būtiskajām Direktīvas 2006/42/EK prasībām.</p> <p>Piemēroti šādi saskaņotie standarti, kā minēts 7. panta 2. punktā:</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklarācijas parakstīšanas vieta un datums: [5] Tās personas vārds, uzvārds un paraksts, kas ir pilnvarota sagatavot šo deklarāciju: [6] Tās personas vārds, uzvārds un adrese, kas ir pilnvarota sastādīt tehnisko dokumentāciju: Benedikts fon Rīdizels Ģenerāldirektors, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Vācija) bvonriedesel@macdon.com</p>
<p>NL</p> <p>Wij, [1] Verklaren dat het product: Machinetype: [2] Naam en model: [3] Serienummer(s): [4] voldoet aan alle relevante bepalingen van de Richtlijn 2006/42/EC.</p> <p>Geharmoniseerde normen toegepast, zoals vermeld in Artikel 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Plaats en datum van verklaring: [5] Naam en handtekening van de bevoegde persoon om de verklaring op te stellen: [6] Naam en adres van de geautoriseerde persoon om het technisch dossier samen te stellen: Benedikt von Riedesel Algemeen directeur, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Duitsland) bvonriedesel@macdon.com</p>	<p>PO</p> <p>My niżej podpisani, [1] Oświadczamy, że produkt: Typ urządzenia: [2] Nazwa i model: [3] Numer seryjny/numery seryjne: [4] spełnia wszystkie odpowiednie przepisy dyrektywy 2006/42/WE.</p> <p>Zastosowaliśmy następujące (zharmonizowane) normy zgodnie z artykułem 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Data i miejsce oświadczenia: [5] Imię i nazwisko oraz podpis osoby upoważnionej do przygotowania deklaracji: [6] Imię i nazwisko oraz adres osoby upoważnionej do przygotowania dokumentacji technicznej: Benedikt von Riedesel Dyrektor generalny, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Niemcy) bvonriedesel@macdon.com</p>	<p>PT</p> <p>Nós, [1] Declaramos, que o produto: Tipo de máquina: [2] Nome e Modelo: [3] Número(s) de Série: [4] cumpre todas as disposições relevantes da Directiva 2006/42/CE.</p> <p>Normas harmonizadas aplicadas, conforme referido no Artigo 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Local e data da declaração: [5] Identidade e assinatura da pessoa autorizada a elaborar a declaração: [6] Nome e endereço da pessoa autorizada a compilar o ficheiro técnico: Benedikt von Riedesel Direktor Geral, MacDon Europa Ltda. Hagenauer Straße 59 65203 Wiesbaden (Alemanha) bvonriedesel@macdon.com</p>	<p>RO</p> <p>Noi, [1] Declarăm, că următorul produs: Tipul mașinii: [2] Denumirea și modelul: [3] Număr (numere) serie: [4] corespunde tuturor dispozițiilor esențiale ale directivei 2006/42/EC.</p> <p>Au fost aplicate următoarele standarde armonizate conform articolului 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Data și locul declarației: [5] Identitatea și semnătura persoanei împuternicite pentru întocmirea declarației: [6] Numele și semnătura persoanei autorizate pentru întocmirea cărții tehnice: Benedikt von Riedesel Manager General, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germania) bvonriedesel@macdon.com</p>
<p>SR</p> <p>Mi, [1] Izjavljujem da proizvod Tip mašine: [2] Naziv i model: [3] Serijski broj(ovi): [4] Ispunjava sve relevantne odredbe direktive 2006/42/EG. Korišćeni su usklađeni standardi kao što je navedeno u članu 7(2): EN ISO 4254-1:2013 EN ISO 4254-7:2009 Datum i mesto izdavanja deklaracije: [5] Identitet i potpis lica ovlašćenog za sastavljanje deklaracije: [6] Ime i adresa osobe ovlašćene za sastavljanje tehničke datoteke: Benedikt von Riedesel Generalni direktor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemačka) bvonriedesel@macdon.com</p>	<p>SV</p> <p>Mi, [1] Intygat att produkten: Maskintyp: [2] Namn och modell: [3] Serienummer: [4] uppfyller alla relevanta villkor i direktivet 2006/42/EG. Harmonierade standarder används, såsom anges i artikel 7(2): EN ISO 4254-1:2013 EN ISO 4254-7:2009 Plats och datum för intyget: [5] Identitet och signatur för person med befogenhet att upprätta intyget: [6] Namn och adress för person behörig att upprätta den tekniska dokumentationen: Benedikt von Riedesel Administrativ chef, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Tyskland) bvonriedesel@macdon.com</p>	<p>SL</p> <p>Mi, [1] izjavljam, da izdelek: Vrsta stroja: [2] Ime in model: [3] Serijska/-e številka/-e: [4] ustreza vsem zadevnim določbam Direktive 2006/42/ES. Uporabljeni usklajeni standardi, kot je navedeno v členu 7(2): EN ISO 4254-1:2013 EN ISO 4254-7:2009 Kraj in datum izjave: [5] Istovetnost in podpis osebe, opolnomočene za pripravo izjave: [6] Ime in naslov osebe, pooblaščen za pripravo tehnične datoteke: Benedikt von Riedesel Generalni direktor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemčija) bvonriedesel@macdon.com</p>	<p>SK</p> <p>My, [1] týmto prehlasujem, že tento výrobok: Typ zariadenia: [2] Názov a model: [3] Výrobné číslo: [4] splňa príslušné ustanovenia a základné požiadavky smernice č. 2006/42/ES. Použité harmonizované normy, ktoré sa uvádzajú v Článku č. 7(2): EN ISO 4254-1:2013 EN ISO 4254-7:2009 Miesto a dátum prehlásenia: [5] Meno a podpis osoby oprávnenej vypracovať toto prehlásenie: [6] Meno a adresa osoby oprávnenej zostaviť technický súbor: Benedikt von Riedesel Generálny riaditeľ MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemecko) bvonriedesel@macdon.com</p>

1037611



# EC Declaration of Conformity – Windrower Assembly Stand



## EC Declaration of Conformity

[1] **MacDon**

MacDon Industries Ltd.  
680 Moray Street,  
Winnipeg, Manitoba, Canada  
R3J 3S3

[4] Not Applicable

[5] December 16, 2021

[2] Windrower Assembly Stand

[6] \_\_\_\_\_

Adrienne Tankeu  
Product Integrity

[3] Part B9064

<p>EN</p> <p>We, [1]</p> <p>Declare, that the product:</p> <p>Machine Type: [2]</p> <p>Name &amp; Model: [3]</p> <p>Serial Number(s): [4]</p> <p>fulfils all the relevant provisions of the Directive 2006/42/EC.</p> <p>Harmonized standards used, as referred to in Article 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Place and date of declaration: [5]</p> <p>Identity and signature of the person empowered to draw up the declaration: [6]</p> <p>Name and address of the person authorized to compile the technical file:</p> <p>Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germany) bvonriedesel@macdon.com</p>	<p>BG</p> <p>Ние, [1]</p> <p>декларираме, че следният продукт:</p> <p>Тип машина: [2]</p> <p>Наименование и модел: [3]</p> <p>Серийен номер(а) [4]</p> <p>отговаря на всички приложими разпоредби на директива 2006/42/ЕО.</p> <p>Използвани са следните хармонизирани стандарти според чл. 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Място и дата на декларацията: [5]</p> <p>Име и подпис на лицето, упълномощено да изготви декларацията: [6]</p> <p>Име и адрес на лицето, упълномощено да състави техническия файл:</p> <p>Бенедикт фон Рийдесел Управител, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Германия) bvonriedesel@macdon.com</p>	<p>CZ</p> <p>My, [1]</p> <p>Prohlašujeme, že produkt:</p> <p>Typ zařízení: [2]</p> <p>Název a model: [3]</p> <p>Sériové(á) číslo(a): [4]</p> <p>splňuje všechna relevantní ustanovení směrnice 2006/42/EC.</p> <p>Byly použity harmonizované standardy, jak je uvedeno v článku 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Místo a datum prohlášení: [5]</p> <p>Identita a podpis osoby oprávněné k vydání prohlášení: [6]</p> <p>Jméno a adresa osoby oprávněné k vyplnění technického souboru:</p> <p>Benedikt von Riedesel generální ředitel, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Německo) bvonriedesel@macdon.com</p>	<p>DA</p> <p>Vi, [1]</p> <p>erklærer, at produktet:</p> <p>Maskintype [2]</p> <p>Navn og model: [3]</p> <p>Serienummer (-numre): [4]</p> <p>Opfylder alle bestemmelser i direktiv 2006/42/EF.</p> <p>Anvendte harmoniserede standarder, som henviser til i paragraf 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Sted og dato for erklæringen: [5]</p> <p>Identitet på og underskrift fra den person, som er bemyndiget til at udarbejde erklæringen: [6]</p> <p>Navn og adresse på den person, som er bemyndiget til at udarbejde den tekniske fil:</p> <p>Benedikt von Riedesel Direktør, MacDon Europe GmbH Hagenauer Straße 59 D-65203 Wiesbaden (Tyskland) bvonriedesel@macdon.com</p>
<p>DE</p> <p>Wir, [1]</p> <p>Erklären hiermit, dass das Produkt:</p> <p>Maschinentyp: [2]</p> <p>Name &amp; Modell: [3]</p> <p>Seriennummer (n): [4]</p> <p>alle relevanten Vorschriften der Richtlinie 2006/42/EG erfüllt.</p> <p>Harmonisierte Standards wurden, wie in folgenden Artikeln angegeben, verwendet 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Ort und Datum der Erklärung: [5]</p> <p>Name und Unterschrift der Person, die dazu befugt ist, die Erklärung auszustellen: [6]</p> <p>Name und Anschrift der Person, die dazu berechtigt ist, die technischen Unterlagen zu erstellen:</p> <p>Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden bvonriedesel@macdon.com</p>	<p>ES</p> <p>Nosotros [1]</p> <p>declaramos que el producto:</p> <p>Tipo de máquina: [2]</p> <p>Nombre y modelo: [3]</p> <p>Números de serie: [4]</p> <p>cumple con todas las disposiciones pertinentes de la directriz 2006/42/EC.</p> <p>Se utilizaron normas armonizadas, según lo dispuesto en el artículo 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Lugar y fecha de la declaración: [5]</p> <p>Identidad y firma de la persona facultada para draw redactar la declaración: [6]</p> <p>Nombre y dirección de la persona autorizada para elaborar el expediente técnico:</p> <p>Benedikt von Riedesel Gerente general - MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Alemania) bvonriedesel@macdon.com</p>	<p>ET</p> <p>Meie, [1]</p> <p>deklareerime, et toode</p> <p>Seadme tüüp: [2]</p> <p>Nimi ja mudel: [3]</p> <p>Seerianumbrid: [4]</p> <p>vastab kõigile direktiivi 2006/42/EÜ asjakohastele sätetele.</p> <p>Kasutatud on järgnevald harmoniseeritud standardeid, millele on viidatud ka punktis 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklaratsiooni koht ja kuupäev: [5]</p> <p>Deklaratsiooni koostamiseks volitatud isiku nimi ja allkiri: [6]</p> <p>Tehnilise dokumendi koostamiseks volitatud isiku nimi ja aadress:</p> <p>Benedikt von Riedesel Peadirektor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Saksamaa) bvonriedesel@macdon.com</p>	<p>FR</p> <p>Nous soussignés, [1]</p> <p>Déclarons que le produit :</p> <p>Type de machine : [2]</p> <p>Nom et modèle : [3]</p> <p>Numéro(s) de série : [4]</p> <p>Est conforme à toutes les dispositions pertinentes de la directive 2006/42/EC.</p> <p>Utilisation des normes harmonisées, comme indiqué dans l'Article 7(2):</p> <p>EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Lieu et date de la déclaration : [5]</p> <p>Identité et signature de la personne ayant reçu le pouvoir de rédiger cette déclaration : [6]</p> <p>Nom et adresse de la personne autorisée à constituer le dossier technique :</p> <p>Benedikt von Riedesel Directeur général, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Allemagne) bvonriedesel@macdon.com</p>

# EC Declaration of Conformity

<p>IT</p> <p>Noi, [1] Dichiariamo che il prodotto: Tipo di macchina: [2] Nome e modello: [3] Numero(i) di serie: [4] soddisfa tutte le disposizioni rilevanti della direttiva 2006/42/CE.</p> <p>Utilizzo degli standard armonizzati, come indicato nell'Articolo 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Luogo e data della dichiarazione: [5] Nome e firma della persona autorizzata a redigere la dichiarazione: [6] Nome e persona autorizzata a compilare il file tecnico: Benedikt von Riedesel General Manager, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germania) bvonriedesel@macdon.com</p>	<p>HU</p> <p>Mi, [1] Ezennel kijelentjük, hogy a következő termék: Gép típusa: [2] Név és modell: [3] Száriaszám(ok): [4] teljesíti a következő irányelv összes vonatkozó előírásait: 2006/42/EK.</p> <p>Az alábbi harmonizált szabványok kerültek alkalmazásra a 7(2) cikkely szerint:  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>A nyilatkozattétel ideje és helye: [5] Azon személy kiléte és aláírása, aki jogosult a nyilatkozat elkészítésére: [6] Azon személy neve és aláírása, aki felhatalmazott a műszaki dokumentáció összeállítására: Benedikt von Riedesel Vezérigazgató, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Németország) bvonriedesel@macdon.com</p>	<p>LT</p> <p>Mes, [1] Pareiškiame, kad šis produktas: Mašinos tipas: [2] Pavadinimas ir modelis: [3] Serijos numeris (-iai): [4] atitinka taikomus reikalavimus pagal Direktyvą 2006/42/EB.</p> <p>Naudojami harmonizuoti standartai, kai nurodoma straipsnyje 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklaracijos vieta ir data: [5] Asmens tapatybės duomenys ir parašas asmens, įgalinto sudaryti šią deklaraciją: [6] Vardas ir pavardė asmens, kuris įgaliotas sudaryti šį techninį failą: Benedikt von Riedesel Generalinis direktorius, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Vokietija) bvonriedesel@macdon.com</p>	<p>LV</p> <p>Mēs, [1] Deklarējam, ka produkts: Mašīnas tips: [2] Nosaukums un modelis: [3] Sērijas numurs(-i): [4] Atbilst visām būtiskajām Direktīvas 2006/42/EK prasībām.</p> <p>Piemēroti šādi saskaņotie standarti, kā minēts 7. panta 2. punktā:  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Deklarācijas parakstīšanas vieta un datums: [5] Tās personas vārds, uzvārds un paraksts, kas ir pilnvarota sagatavot šo deklarāciju: [6] Tās personas vārds, uzvārds un adrese, kas ir pilnvarota sastādīt tehnisko dokumentāciju: Benedikts fon Rīdels Generāldirektors, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Vācija) bvonriedesel@macdon.com</p>
<p>NL</p> <p>Wij, [1] Verklaren dat het product: Machinetype: [2] Naam en model: [3] Serienummer(s): [4] voldoet aan alle relevante bepalingen van de Richtlijn 2006/42/EC.</p> <p>Geharmoniseerde normen toegepast, zoals vermeld in Artikel 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Plaats en datum van verklaring: [5] Naam en handtekening van de bevoegde persoon om de verklaring op te stellen: [6] Naam en adres van de geautoriseerde persoon om het technisch dossier samen te stellen: Benedikt von Riedesel Algemeen directeur, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Duitsland) bvonriedesel@macdon.com</p>	<p>PO</p> <p>My niżej podpisani, [1] Oświadczamy, że produkt: Typ urządzenia: [2] Nazwa i model: [3] Numer serijny/numery seryjne: [4] spełnia wszystkie odpowiednie przepisy dyrektywy 2006/42/WE.</p> <p>Zastosowaliśmy następujące (zharmonizowane) normy zgodnie z artykułem 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Data i miejsce oświadczenia: [5] Imię i nazwisko oraz podpis osoby upoważnionej do przygotowania deklaracji: [6] Imię i nazwisko oraz adres osoby upoważnionej do przygotowania dokumentacji technicznej: Benedikt von Riedesel Dyrektor generalny, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Niemcy) bvonriedesel@macdon.com</p>	<p>PT</p> <p>Nós, [1] Declaramos, que o produto: Tipo de máquina: [2] Nome e Modelo: [3] Número(s) de Série: [4] cumpre todas as disposições relevantes da Directiva 2006/42/CE.</p> <p>Normas harmonizadas aplicadas, conforme referido no Artigo 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Local e data da declaração: [5] Identidade e assinatura da pessoa autorizada a elaborar a declaração: [6] Nome e endereço da pessoa autorizada a compilar o ficheiro técnico: Benedikt von Riedesel Gerente Geral, MacDon Europa Ltda. Hagenauer Straße 59 65203 Wiesbaden (Alemanha) bvonriedesel@macdon.com</p>	<p>RO</p> <p>Noi, [1] Declărăm, cã urmãtorul produs: Tipul mașinii: [2] Denumirea și modelul: [3] Număr (numere) serie: [4] corespunde tuturor dispozițiilor esențiale ale directivei 2006/42/EC.</p> <p>Au fost aplicate urmãtoarele standarde armonizate conform articolului 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009</p> <p>Data și locul declarației: [5] Identitatea și semnãtura persoanei împuternicite pentru întocmirea declarației: [6] Numele și semnãtura persoanei autorizate pentru întocmirea cãrții tehnice: Benedikt von Riedesel Manager General, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Germania) bvonriedesel@macdon.com</p>
<p>SR</p> <p>Mi, [1] Izjavljujemo da proizvod Tip mašine: [2] Naziv i model: [3] Serijski broj(ovi): [4] Ispunjava sve relevantne odredbe direktive 2006/42/EC. Korišæeni su usklaæeni standardi kao što je navedeno u èlanu 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009 Datum i mesto izdavanja deklaracije: [5] Identitet i potpis lica ovlašæenog za sastavljanje deklaracije: [6] Ime i adresa osobe ovlašæene za sastavljanje tehniêke datoteke: Benedikt von Riedesel Generalni direktor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemačka) bvonriedesel@macdon.com</p>	<p>SV</p> <p>Mi, [1] Intygat att produkten: Maskintyp: [2] Namn och modell: [3] Serienummer: [4] uppfyller alla relevanta villkor i direktivet 2006/42/EG. Harmonierade standarder används, såsom anges i artikel 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009 Plats och datum för intyget: [5] Identitet och signatur för person med befogenhet att upprätta intyget: [6] Namn och adress för person behörig att upprätta den tekniska dokumentationen: Benedikt von Riedesel Administrativ chef, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Tyskland) bvonriedesel@macdon.com</p>	<p>SL</p> <p>Mi, [1] izjavljamo, da izdelek: Vrsta stroja: [2] Ime in model: [3] Serijska/-e številka/-e: [4] ustreza vsem zadevnim doloèbam Direktive 2006/42/ES. Uporabljeni usklajeni standardi, kot je navedeno v èlenu 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009 Kraj in datum izjave: [5] Istovetnost in podpis osebe, opolnomoène za pripravo izjave: [6] Ime in naslov osebe, pooblašène za pripravo tehniêke datoteke: Benedikt von Riedesel Generalni direktor, MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemèija) bvonriedesel@macdon.com</p>	<p>SK</p> <p>My, [1] týmto prehlasujeme, že tento výrobok: Typ zariadenia: [2] Názov a model: [3] Výrobné číslo: [4] splňa príslušné ustanovenia a základné požiadavky smernice è. 2006/42/ES. Použitã harmonizované normy, ktoré sa uvádzajú v èlánku è. 7(2):  EN ISO 4254-1:2013 EN ISO 4254-7:2009 Miesto a dátum prehlásenia: [5] Meno a podpis osoby oprávnenej vypracovať toto prehlásenie: [6] Meno a adresa osoby oprávnenej zostaviť technický súbor: Benedikt von Riedesel Generálny riaditeľ MacDon Europe GmbH Hagenauer Straße 59 65203 Wiesbaden (Nemecko) bvonriedesel@macdon.com</p>

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## Introduction

This manual contains unloading, assembly, and pre-delivery information for MacDon M1170NT5 Windrowers. When coupled with one of the compatible draper headers, the windrower cuts and lays a variety of grain, hay, and specialty crops in windrows.

If the shipment is damaged or is missing parts, contact the following according to your region:

- Australia: [service@macdon.com.au](mailto:service@macdon.com.au)
- Brazil: [garantia-brasil@macdon.com](mailto:garantia-brasil@macdon.com)
- Europe (except Russia): [MarketingEurope@macdon.com](mailto:MarketingEurope@macdon.com)
- Russia: [shortageanddamage@macdon.com](mailto:shortageanddamage@macdon.com)

The windrower is Dual Direction® and can be driven in cab-forward or engine-forward mode.

Right and left designations are determined by the operator's position facing the direction of travel. This manual uses the terms right cab-forward, left cab-forward, right engine-forward, and left engine-forward when referencing specific locations on the machine.

This document is currently available in English only.

## Summary of Changes

The following list provides an account of major changes from the previous version of this document.

Section	Summary of Change	Internal Use Only
<i>EC Declaration of Conformity – Windrower Assembly Stand, page iii</i>	Added Declaration of Conformity.	ECN 62447
—	Removed topic titled “Safety Sign Locations” for consistency with other unloading and assembly manuals.	Technical Publications
<i>2.4 Removing Fuel Tank / Right Platform Shipping Assembly, page 26</i>  • Step 19, page 31	Revised step to specify which parts are retained or discarded. Specified that this step must be repeated.	Technical Publications
<i>2.6 Removing Wheel Leg Assemblies, page 34</i>  • Step 8, page 35	Revised step to mention when it is necessary to have a second person to assist with the task.	Technical Publications
<i>2.7 Removing Upper Shipping Supports, page 37</i>	Revised all steps (except the first step) to specify which parts are retained or discarded.	Technical Publications
<i>3.1 Lifting Windrower onto Assembly Stand (MD #B9064), page 39</i>	Added “(MD #B9064)” to title for clarity.	Technical Publications
<i>3.1 Lifting Windrower onto Assembly Stand (MD #B9064), page 39</i>  • Step 2, page 40	Removed the height specifications from this step because they are not required for unloading and assembly purposes.	Technical Publications
<i>3.1 Lifting Windrower onto Assembly Stand (MD #B9064), page 39</i>  • Step 6, page 41	Revised step for clarity.	Technical Publications
<i>3.2 Removing Remaining Items from Shipping Configuration, page 42</i>  • Step 2, page 42 to Step 5, page 43	Revised steps to specify which parts are retained or discarded. Added the step about removing the lifting plate.	Technical Publications
<i>3.3 Installing Wheel Legs, page 44</i>  • Step 1, page 44 to Step 4, page 44	Revised steps for clarity and to confirm which parts are retained or discarded.	Technical Publications
<i>3.4 Installing Drive Wheels, page 47</i>  • Step 6, page 48	Specified that the direction of the tread must face cab-forward. Removed the following NOTE because turf tires are not offered for the M1170N75:  • <b>NOTE:</b> For wheels equipped with turf tires (those with a diamond tread pattern), be sure that the arrow on the sidewall points cab-forward.	Technical Publications

Section	Summary of Change	Internal Use Only
<i>4.1.2 Advising Customer where to Install Registration Plates, page 112</i>	Added topic.	Engineering
<i>Predelivery Checklist, page 189</i>	Added “Advise customer where to install registration plates” to checklist.	Engineering



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# Chapter 1: Safety

Understanding and consistently following these safety procedures will help to ensure the safety of those operating the machine and of bystanders.

## 1.1 Safety Alert Symbols

The safety alert symbol indicates important safety messages in this manual and on safety signs on the machine.

This symbol means:

- **ATTENTION!**
- **BECOME ALERT!**
- **YOUR SAFETY IS INVOLVED!**

Carefully read and follow the safety message accompanying this symbol.

### Why is safety important to you?

- Accidents disable and kill
- Accidents cost
- Accidents can be avoided



Figure 1.1: Safety Symbol

## 1.2 Signal Words

Three signal words, **DANGER**, **WARNING**, and **CAUTION**, are used to alert you to hazardous situations. Two signal words, **IMPORTANT** and **NOTE**, identify non-safety related information.

Signal words are selected using the following guidelines:



### **DANGER**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



### **WARNING**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It may also be used to alert against unsafe practices.



### **CAUTION**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may be used to alert against unsafe practices.

#### **IMPORTANT:**

Indicates a situation that, if not avoided, could result in a malfunction or damage to the machine.

#### **NOTE:**

Provides additional information or advice.

## 1.3 General Safety

Protect yourself when assembling, operating, and servicing machinery.

### CAUTION

The following general farm safety precautions should be part of your operating procedure for all types of machinery.

Wear all protective clothing and personal safety devices that could be necessary for the job at hand. Do **NOT** take chances. You may need the following:

- Hard hat
- Protective footwear with slip-resistant soles
- Protective glasses or goggles
- Heavy gloves
- Wet weather gear
- Respirator or filter mask

In addition, take the following precautions:

- Be aware that exposure to loud noises can cause hearing impairment. Wear suitable hearing protection devices such as earmuffs or earplugs to help protect against loud noises.



Figure 1.2: Safety Equipment



Figure 1.3: Safety Equipment

- Provide a first aid kit in case of emergencies.
- Keep a properly maintained fire extinguisher on the machine. Familiarize yourself with its use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when Operators are fatigued or in a hurry. Take time to consider the safest way to accomplish a task. **NEVER** ignore the signs of fatigue.

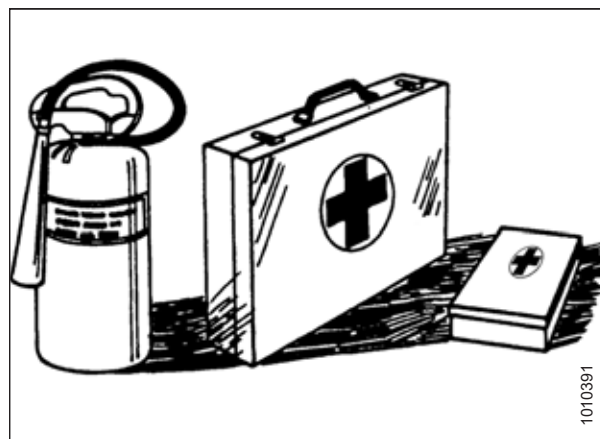


Figure 1.4: Safety Equipment

## SAFETY

- Wear close-fitting clothing and cover long hair. **NEVER** wear dangling items such as scarves or bracelets.
- Keep all shields in place. **NEVER** alter or remove safety equipment. Ensure that the driveline guards can rotate independently of their shaft, and that they can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Parts from other manufacturers may not meet the correct strength, design, or safety requirements.



Figure 1.5: Safety around Equipment

- Keep hands, feet, clothing, and hair away from moving parts. **NEVER** attempt to clear obstructions or objects from a machine while the engine is running.
- Do **NOT** modify the machine. Unauthorized modifications may impair the functionality and/or safety of the machine. It may also shorten the machine's service life.
- To avoid injury or death from the unexpected startup of the machine, **ALWAYS** stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

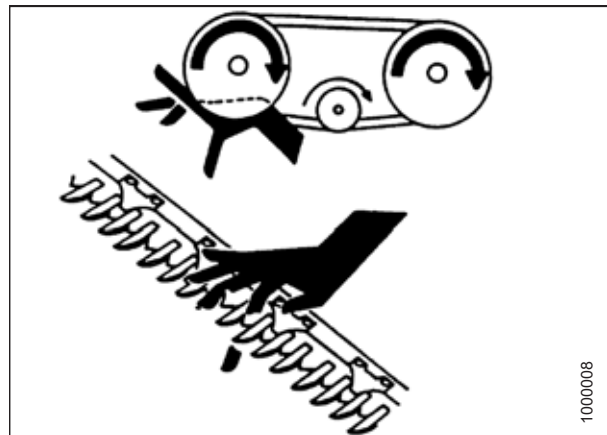


Figure 1.6: Safety around Equipment

- Keep the machine service area clean and dry. Wet and/or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Ensure that all electrical outlets and tools are properly grounded.
- Keep the work area well-lit.
- Keep machinery clean. Straw and chaff on a hot engine are fire hazards. Do **NOT** allow oil or grease to accumulate on service platforms, ladders, or controls. Clean machines before they are stored.
- **NEVER** use gasoline, naphtha, or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover any sharp or extending components to prevent injury from accidental contact.



Figure 1.7: Safety around Equipment

## 1.4 Maintenance Safety

Protect yourself when maintaining machinery.

To ensure your safety while maintaining the machine:

- Review the operator's manual and all safety items before operating or performing maintenance on the machine.
- Place all controls in Neutral, stop the engine, set the parking brake, remove the ignition key, and wait for all moving parts to stop before servicing, adjusting, or repairing the machine.
- Follow good shop practices:
  - Keep service areas clean and dry
  - Ensure that electrical outlets and tools are properly grounded
  - Keep the work area well lit
- Relieve pressure from hydraulic circuits before servicing and/or disconnecting the machine.
- Ensure that all components are tight and that steel lines, hoses, and couplings are in good condition before applying pressure to hydraulic systems.
- Keep hands, feet, clothing, and hair away from all moving and/or rotating parts.
- Clear the area of bystanders, especially children, when carrying out any maintenance, repairs, or adjustments.
- Install the transport lock or place safety stands under the frame before working under the machine.
- If more than one person is servicing the machine at the same time, be aware that rotating a driveline or another mechanically driven component by hand (for example, accessing a lubricant fitting) will cause drive components in other areas (belts, pulleys, and knives) to move. Stay clear of driven components at all times.
- Wear protective gear when working on the machine.
- Wear heavy gloves when working on knife components.



Figure 1.8: Safety around Equipment

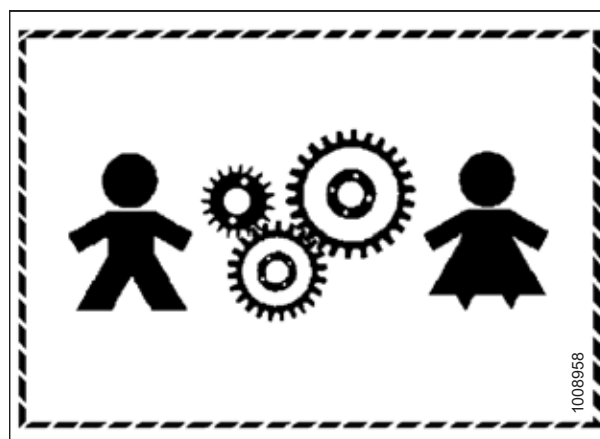


Figure 1.9: Equipment is NOT Safe for Children



Figure 1.10: Safety Equipment

## 1.5 Hydraulic Safety

Protect yourself when assembling, operating, and servicing hydraulic components.

- Always place all hydraulic controls in Neutral before leaving the operator's seat.
- Make sure that all components in the hydraulic system are kept clean and in good condition.
- Replace any worn, cut, abraded, flattened, or crimped hoses and steel lines.
- Do **NOT** attempt any makeshift repairs to hydraulic lines, fittings, or hoses by using tapes, clamps, cements, or welding. The hydraulic system operates under extremely high pressure. Makeshift repairs can fail suddenly and create hazardous conditions.



Figure 1.11: Testing for Hydraulic Leaks

- Wear proper hand and eye protection when searching for high-pressure hydraulic fluid leaks. Use a piece of cardboard as a backstop instead of your hands to isolate and identify a leak.
- If injured by a concentrated, high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin.



Figure 1.12: Hydraulic Pressure Hazard

- Ensure that all components are tight and that steel lines, hoses, and couplings are in good condition before applying pressure to a hydraulic system.

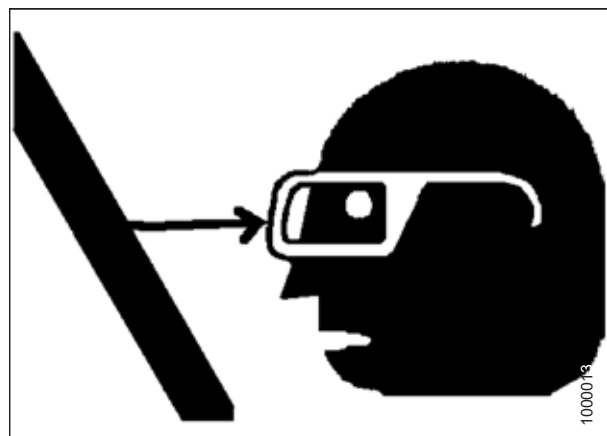


Figure 1.13: Safety around Equipment



## 1.6 Tire Safety

Understand the risks of handling tires before performing maintenance tasks.



### WARNING

- A tire can explode during inflation, causing serious injury or death.
- Follow the proper procedures when mounting a tire. Failure to do so can produce an explosion, causing serious injury or death.

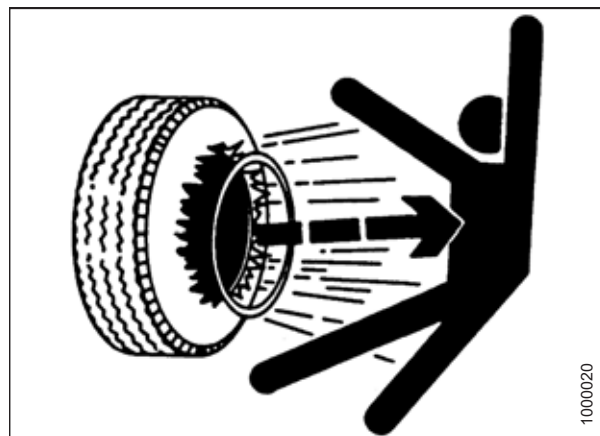


Figure 1.14: Overinflated Tire



### WARNING

- Do NOT remove, install, or repair a tire on a rim unless you have the proper equipment and experience to perform the task. Take the tire and rim to a qualified tire repair shop if necessary.
- Ensure that the tire is correctly seated on the rim before inflating it. If the tire is not correctly positioned on the rim or is overinflated, the tire bead can loosen on one side causing air to escape at high speed and with great force. An air leak of this nature can thrust the tire in any direction, endangering anyone in the area.
- Do NOT stand over the tire when inflating it. Use a clip-on chuck and extension hose when inflating a tire.
- Do NOT exceed the maximum inflation pressure indicated on the tire label.
- Never use force on an inflated or partially-inflated tire.
- Ensure that all air is removed from the tire before removing the tire from the rim.
- Never weld a wheel rim.
- Replace tires that have defects. Replace wheel rims that are cracked, worn, or severely rusted.

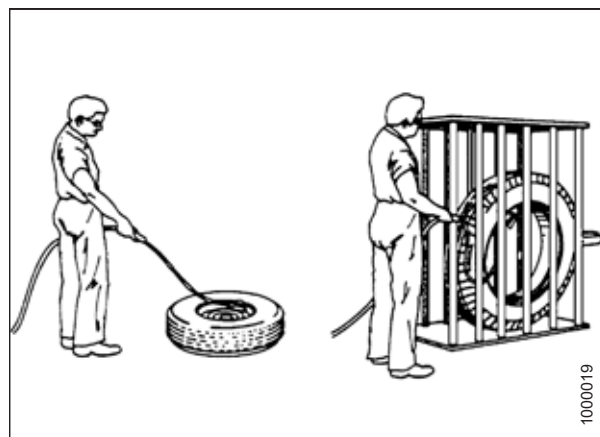


Figure 1.15: Safely Inflating Tire

## 1.7 Battery Safety

Understand the risks of working with lead-acid batteries before performing installation or maintenance tasks.

### WARNING

- Keep all sparks and flames away from batteries. The electrolyte fluid in the battery cells emits an explosive gas which can build up over time.
- Ensure that there is adequate ventilation when charging the battery.



Figure 1.16: Safety around Batteries

### WARNING

- Wear safety glasses when working near batteries.
- To avoid the loss of electrolyte fluid, do NOT tip a battery more than 45° off of its base.
- Battery electrolyte causes severe burns. Ensure that it does not contact your skin, eyes, or clothing.
- Electrolyte splashed into the eyes is extremely damaging. If you are treating this condition: force the eye open and flush it with cool, clean water for 5 minutes. Call a doctor immediately.
- If electrolyte is spilled or splashed on one's clothing or their body, neutralize it immediately with a solution of baking soda and water, then rinse the strained area with clean water.

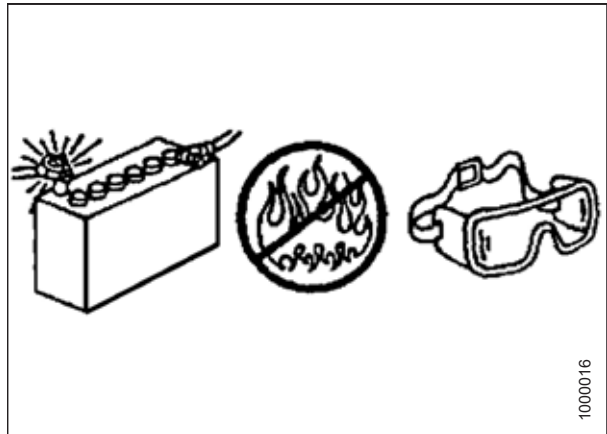


Figure 1.17: Safety around Batteries

### WARNING

- To avoid injury from a spark or short circuit, disconnect the battery ground cable before servicing any part of the electrical system.
- Do NOT operate the engine with the alternator or battery disconnected. With the battery cables disconnected and the engine running, a high voltage can be built up if the cable terminals touch the machine frame. Anyone touching the machine frame under these conditions may be electrocuted.
- When working around batteries, remember that all of the exposed metal parts are live. Never lay a metal object across the terminals; this will generate a powerful spark and can electrocute the holder of the tool if they are not properly grounded.
- Keep batteries out of reach of children.

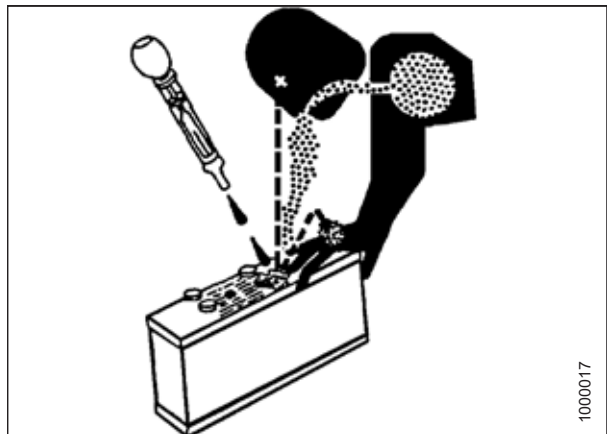


Figure 1.18: Safety around Batteries

## 1.8 Welding Precaution

Understand these critical precautions before attempting to weld anything on the windrower.

### IMPORTANT:

If the procedures below are not followed, damage to the windrower's electronic components may result. Some components may only be partially damaged, which would result in some electrical components failing in an intermittent way. Such faults are very difficult to diagnose reliably.

The windrower is equipped with several sensitive electronic components. Therefore, components to be welded should be removed from the windrower whenever possible rather than welded in place.

When welding needs to be performed on a header, disconnect the header completely from the windrower before beginning. These same guidelines apply to plasma cutting, or any other high-current electrical operation performed on the machine.

### IMPORTANT:

Ensure that the windrower is parked on a level surface, the ignition is turned off, and the key is removed before disconnecting anything.

### *The following items need to be disconnected:*

- Negative battery terminals (A) (two connections)

### IMPORTANT:

Always disconnect the battery terminals first, and reconnect them last.

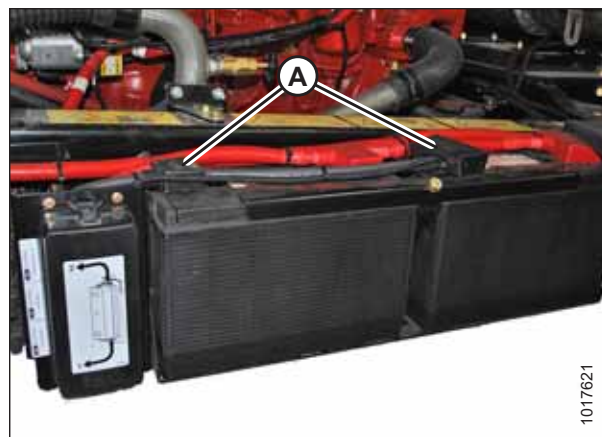


Figure 1.19: Negative Terminals

- Master controller (A)  
Four connectors: P231, P232, P233, and P234  
Location: Behind the cab, near the header lift/fan manifold  
To disconnect the connectors, press the two outer tabs, and pull the connector away from the master controller.

### IMPORTANT:

When reconnecting these connectors, ensure that the connectors are fully seated into the master controller, and that the two locking tabs on each end of all four connectors have popped outward. If the tabs are not popped outward, the connector is not fully seated.

### IMPORTANT:

Do **NOT** power up or operate the windrower until these connectors are locked into place.



Figure 1.20: Master Controller

## SAFETY

- Firewall extension module (A)  
Two connectors: P235 and P236

Location: Behind the cab, near the header lift/fan manifold

To disconnect the connectors, insert the end of a small 3–6 mm (1/8–1/4 in.) blade screwdriver into the connector's locking tab. Gently pry upward (no more than 6 mm [1/4 in.]) to unlock the connector tab, and then pull the connector away from the module.



Figure 1.21: Firewall Extension Module

- Chassis extension module (A)  
Two connectors: P247 and P248

Location: Under the cab, inside the left frame rail

To disconnect the connectors, insert the end of a small 3–6 mm (1/8–1/4 in.) blade screwdriver into the connector's locking tab. Gently pry upward (no more than 6 mm [1/4 in.]) to unlock the connector tab, and then pull the connector away from the module.

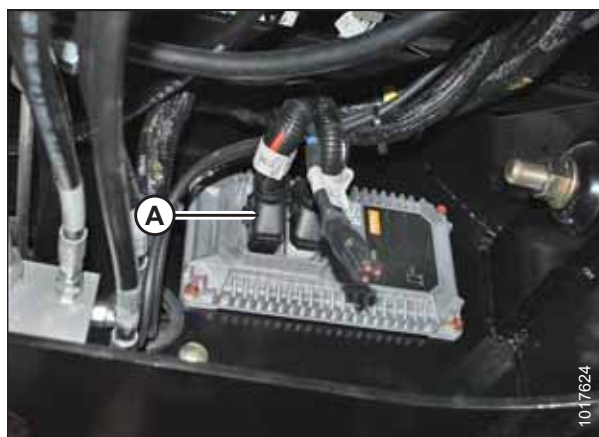


Figure 1.22: Chassis Extension Module

- Engine Control Module (ECM)  
Two connectors for Cummins: P100 (A) and J1 Cummins Proprietary ECM Connector (B)

Location: On the engine

To disconnect the connectors, pull the rubber boot off of the cover, unlock the latch, and undo the main over-center latch. Remove strain relief bolts (C) so that the connectors can be pulled away from the ECM.

### IMPORTANT:

Be sure to disconnect both connectors. Note the connector locations for reinstallation.

### IMPORTANT:

Be sure to reconnect the connectors in the proper locations. Do **NOT** cross connect the connectors.

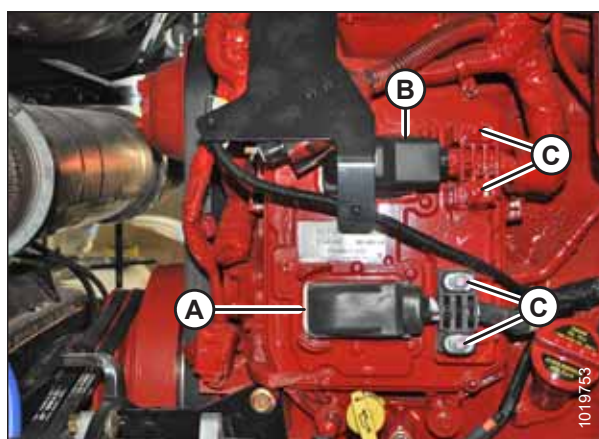
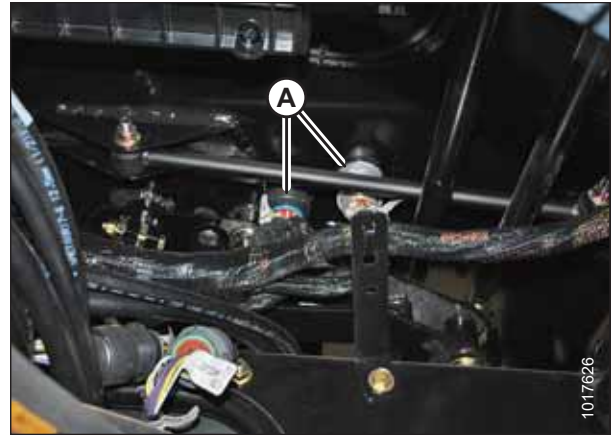


Figure 1.23: Engine Control Module

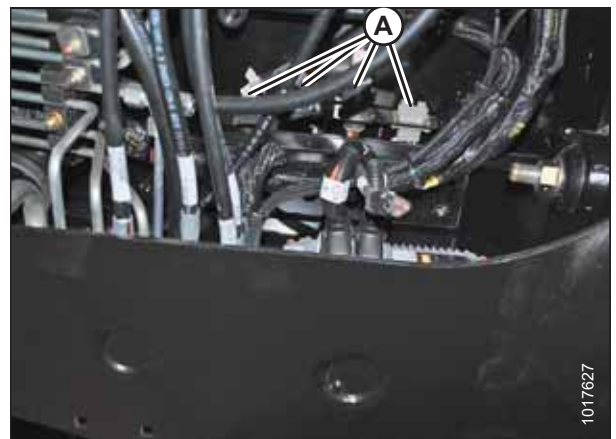
**NOTE:**

To disconnect the remaining circular Deutsch connectors, rotate the outer collar counterclockwise.

- Cab connectors (A)  
Two round connectors: C1 and C2  
Location: Under the cab
- Roof connectors (A)  
Four connectors: C10, C12, C13, and C14  
Location: Under the cab at the base of the left cab post
- Chassis relay module (A)  
Three connectors: P240, P241, and P242  
Location: Outside the left frame rail near the batteries



**Figure 1.24: Cab Connectors**



**Figure 1.25: Roof Connectors**



**Figure 1.26: Chassis Relay Module**



## SAFETY

- Engine harness (A)  
Two round connectors: C30 and C31  
Location: Inside the left frame rail, at the rear of the windrower

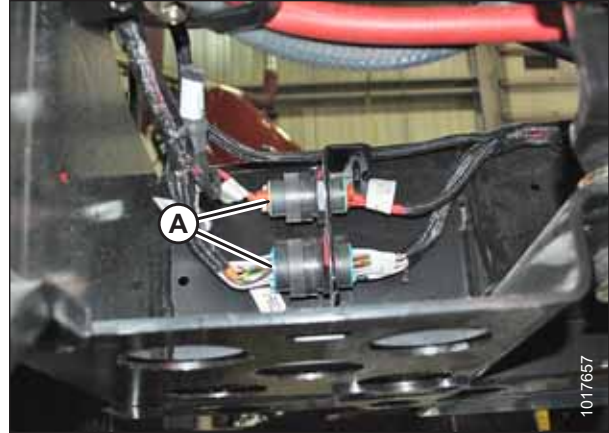


Figure 1.27: Engine Harness

- Air conditioning (A/C) box connectors (A)  
Two connectors: C15 and C16  
Location: Rear of the A/C box



Figure 1.28: A/C Box Connectors

- Wheel motor connectors (A)  
Two round connectors: C25 and C26  
Location: Under the center of the frame, just behind the front cross member

### IMPORTANT:

To connect the circular Deutsch connectors without bending the pins, fully align the plug with the receptacle before pressing the connector in.

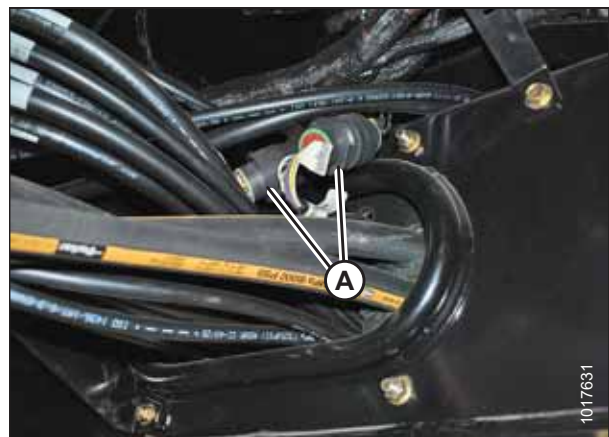


Figure 1.29: Wheel Motor Connectors

To align the connectors:

1. Observe the channel cuts and mating channel protrusions on the inner part of the circular walls of the connectors.
2. Face the mating connectors towards each other, and rotate the connectors so that the channels are aligned.
3. Press the connectors together while turning the outer connector clockwise until the collar locks.

## 1.9 Engine Safety

For the safety of yourself and others, understand the hazards associated with the engine before operating the machine, or before servicing the engine or nearby components.



### WARNING

Do NOT use aerosol starting aids such as ether when attempting to start the engine. Use of these substances could result in an explosion.



### CAUTION

- When starting up a new, serviced, or repaired engine, always be ready to stop the engine to prevent overspeeding. Do this by shutting off the air and/or fuel supply to the engine.
- Do NOT bypass or disable automatic shutoff circuits. These circuits help prevent injury and damage to the engine. For instructions, refer to the technical manual.
- Inspect the engine for potential hazards.
- Before starting the engine, ensure that no one is on, underneath, or close to the engine. Ensure that bystanders are clear of the area.
- All protective guards and covers must be installed if the engine must be started to perform service procedures.
- Work around rotating parts carefully.
- If a warning tag is attached to the engine start switch or controls, do NOT start the engine or move the controls. Consult whoever attached the warning tag before starting the engine.
- Start the engine from the operator's station. Follow the procedure in the Starting Engine section of the operator's manual. Following the correct procedure will help prevent major damage to engine components and prevent personal injury.
- To ensure that the jacket water heater (if equipped) and/or lubricant oil heater (if equipped) are working correctly, check the water temperature gauge and/or oil temperature gauge during heater operation.
- Engine exhaust contains combustion products, which can be harmful to your health. Always start and operate the engine in a well-ventilated area. If the engine is started in an enclosed area, vent the exhaust to the outside.
- Engine exhaust gases become very hot during operation and can burn people and common materials. Stay clear of the rear of machine and avoid exhaust gases when the engine is running.

#### NOTE:

If the engine will be operated in very cold conditions, then an additional cold-starting aid may be required.

### 1.9.1 High-Pressure Rail

Fuel is delivered to the engine under high pressure. Understand the hazards associated with the fuel delivery system before servicing it.



### WARNING

- Before disconnecting fuel lines or any other components under high pressure between the fuel pump and the high-pressure common rail fuel system, confirm that the fuel pressure has been relieved.
- Contact with high-pressure fuel may cause fluid penetration and burn hazards. High-pressure fuel spray presents a potential fire hazard. Failure to follow these instructions may cause injury or death.

## 1.9.2 Engine Electronics

For the safety of yourself and of others, and to prevent damage to the engine control module (ECM), understand the hazards associated with engine electronics.



### WARNING

**Tampering with the electronic system or the original equipment manufacturer (OEM) wiring installation is dangerous and could result in injury to people, death, or damage to the equipment.**



### WARNING

**Electrical shock hazard. The electronic unit injectors use DC voltage. The engine control module (ECM) sends this voltage to the electronic unit injectors. Do NOT touch the harness connector for the electronic unit injectors while the engine is operating. Failure to follow this instruction could result in personal injury or death.**

This engine has a comprehensive, programmable engine monitoring system. The ECM has the ability to monitor engine operating conditions. If certain conditions exceed their allowable range, the ECM will initiate immediate action.

The engine monitoring system can initiate the following actions:

- Warning
- Derate
- Shut down

Abnormalities in the following monitored conditions can limit engine speed and/or engine power:

- Engine coolant temperature
- Engine oil pressure
- Engine speed
- Intake manifold air temperature



## 1.10 Safety Signs

Safety signs are decals placed on the machine where there is a risk of personal injury, or where the Operator should take extra precautions before operating the controls. They are usually yellow.

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or illegible.
- If the original part on which a safety sign was installed is replaced, ensure that the repair part displays the current safety sign.

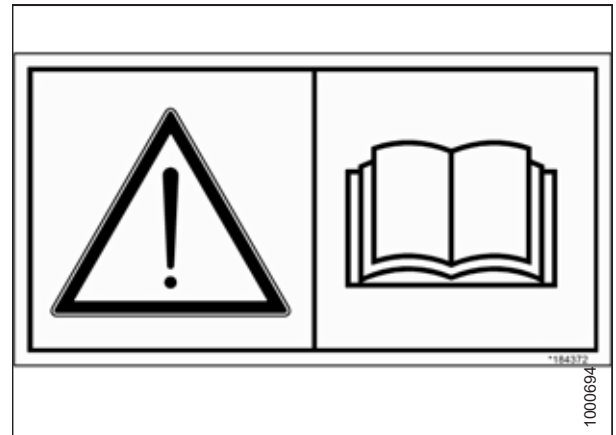


Figure 1.30: Operator's Manual Decal

### 1.10.1 Installing Safety Decals

Replace any safety decals that are worn or damaged.

1. Decide exactly where you are going to place the decal.
2. Clean and dry the installation area.
3. Remove the smaller portion of the split backing paper.
4. Place the decal in position and slowly peel back the remaining paper, smoothing the decal as it is applied.
5. Prick small air pockets with a pin and smooth them out.



## Chapter 2: Unloading Windrower

Unload all windrower parts before beginning assembly. Carefully follow these procedures in the order in which they are presented.

### 2.1 Unloading Container

Unload the windrower properly to avoid damaging the windrower.

#### **DANGER**

To prevent injury to bystanders and to avoid striking them with machinery, do NOT allow people to stand in the unloading area.

1. Move the trailer into position and block the trailer wheels.
2. Lower the trailer storage stands.
3. Unlock and open the container doors and remove all blocking.
4. Check the container floor for nails or other obstructions and remove them if necessary.
5. Position the platform or the ramp at the container opening.
6. Attach the chain/pull strap to the slots in support channels (A).
7. Pull the windrower slowly from the container onto the platform.



Figure 2.1: Windrower Shipping Assembly

## 2.2 Moving Windrower to Assembly Area

The windrower can be moved to the assembly area using either a crane or a forklift.

- To move the windrower using a crane, refer to [2.2.1 Moving Windrower to Assembly Area – Crane Method, page 18](#).
- To move the windrower using a forklift, refer to [2.2.2 Moving Windrower to Assembly Area – Forklift Method, page 20](#).

### 2.2.1 Moving Windrower to Assembly Area – Crane Method

Use the specified lift sling and lifting points to lift the windrower container assembly using a crane.

#### DANGER

To prevent injury to bystanders and to avoid striking them with machinery, do NOT allow people to stand in the unloading area.

#### DANGER

The equipment used for loading or unloading a header must meet or exceed the requirements specified in this document. Using inadequate equipment may result in chain breakage, vehicle tipping, machine damage or bodily harm to operators or bystanders.

Lift Sling	
Maximum Working Load	12,884 kg (28,404 lb.)

Chain	
Type	Overhead 1/2 in. lifting quality
Minimum Working Load	3221 kg (7100 lb.)

Lifting Vehicle	
Minimum Lifting Capacity	9072 kg (20,000 lb.)

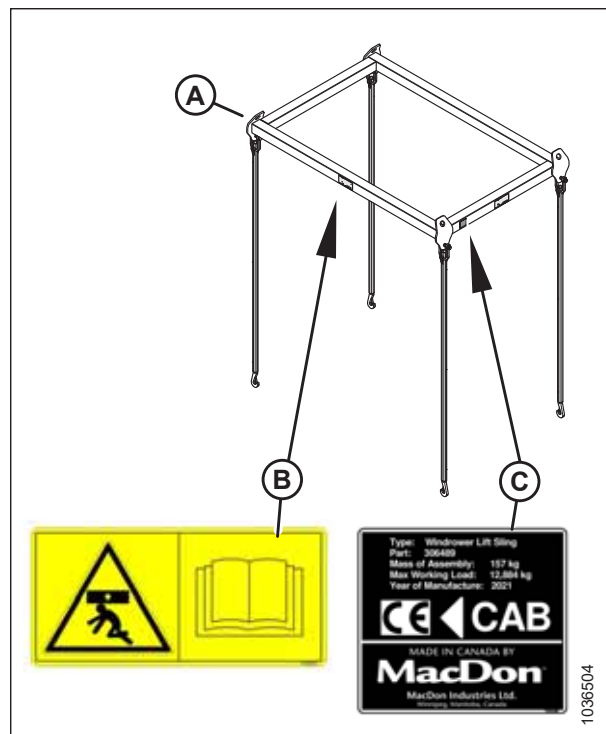


Figure 2.2: Lift Sling

- A - Lift Sling  
B - Decal (Four Places)  
C - Decal

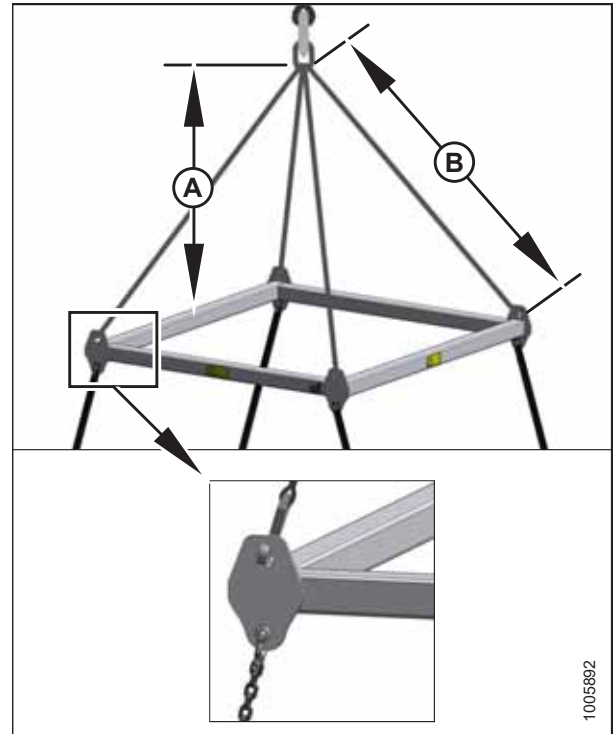
## UNLOADING WINDROWER

*To move the windrower to the assembly area, follow these steps:*

1. Attach the chains or cables to the four lifting points on the lift sling, and connect the loop ends to the crane hook.

**IMPORTANT:**

Use cables or chains with a minimum lifting capacity of 3221 kg (7100 lb.).

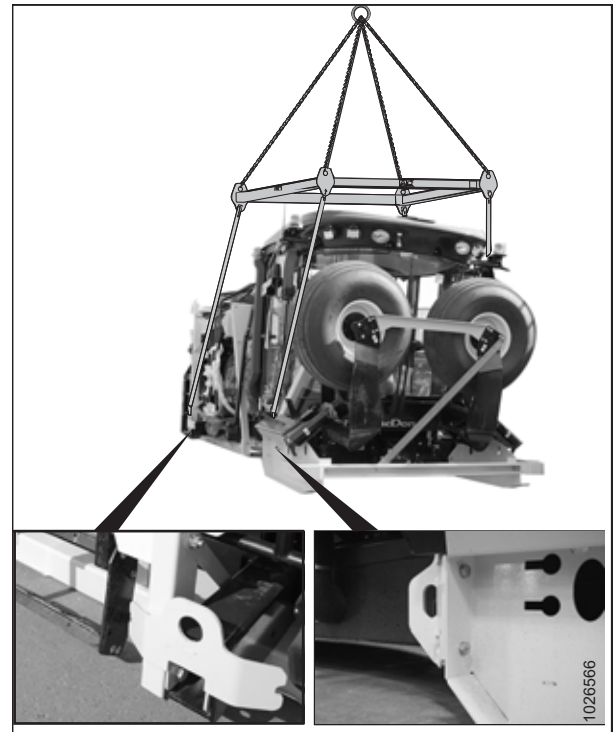


**Figure 2.3: Lift Sling**

A - 1500 mm (59 in.) Minimum

B - 2120 mm (83.5 in.) Typical

2. Attach the lift sling to the four designated lifting points on the windrower shipping frame as shown.
3. Lift the windrower off the platform and move it to the setup area.



**Figure 2.4: Shipping Frame Lifting Points**

## UNLOADING WINDROWER

4. Lower windrower onto 152 mm (6 in.) blocks (A) as shown.
5. Remove the chains from the shipping frame.
6. Check for shipping damage and missing parts.
7. Proceed to [2.3 Removing Caster Wheel Shipping Assembly, page 23](#).

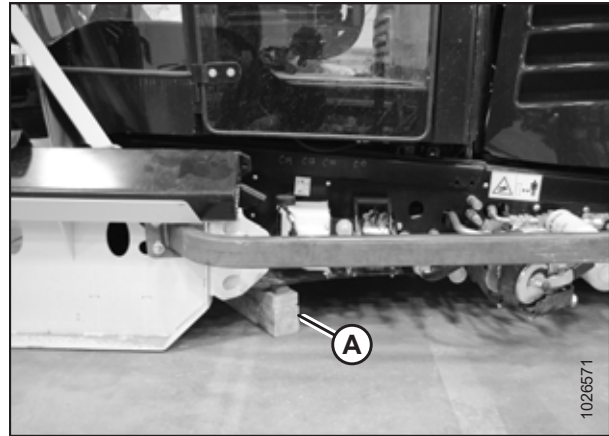


Figure 2.5: Windrower Shipping Assembly on Blocks

### 2.2.2 Moving Windrower to Assembly Area – Forklift Method

The windrower can be moved to the assembly area using a forklift.



#### **DANGER**

To prevent injury to bystanders and to avoid striking them with machinery, do NOT allow people to stand in the unloading area.



#### **DANGER**

The equipment used for loading or unloading a header must meet or exceed the requirements specified in this document. Using inadequate equipment may result in chain breakage, vehicle tipping, machine damage or bodily harm to operators or bystanders.

#### **IMPORTANT:**

Refer to the shipping assembly specifications in Table [2.1, page 21](#) and consult your forklift distributor to determine a suitable forklift.

## UNLOADING WINDROWER

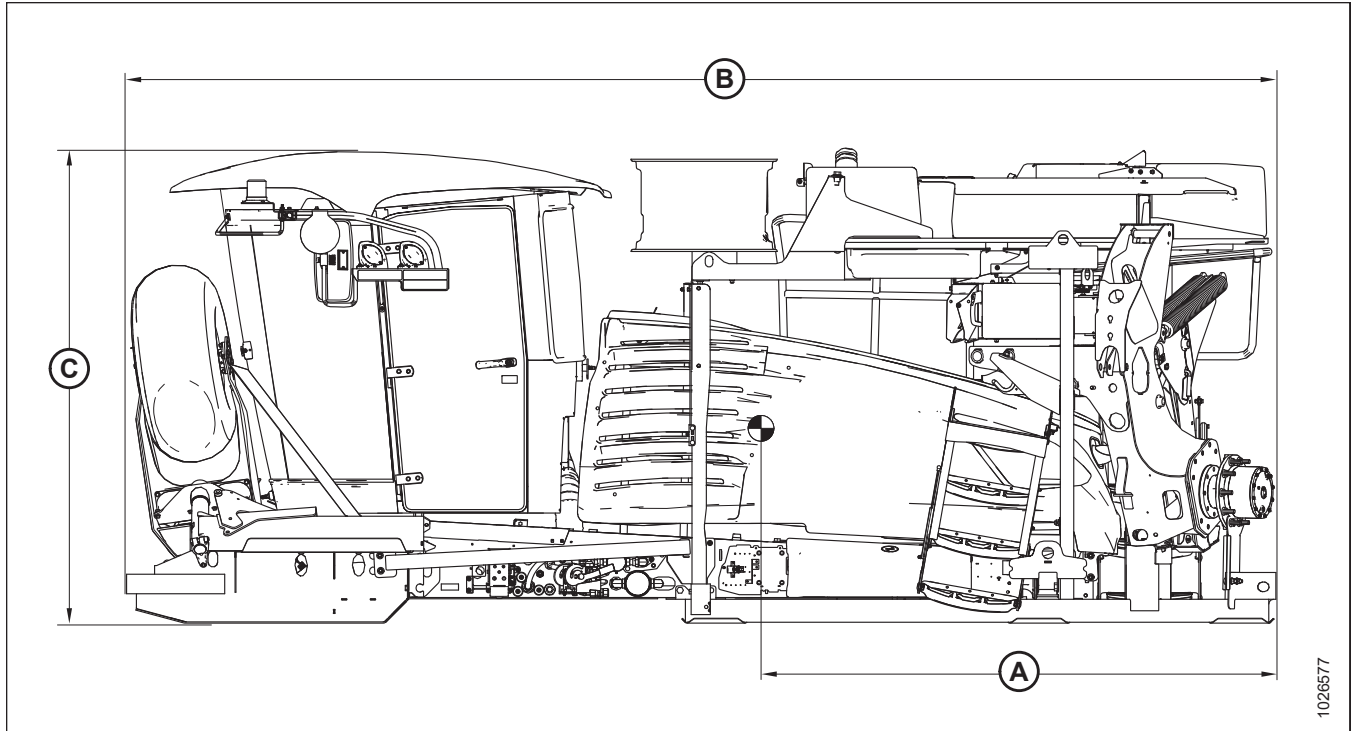


Figure 2.6: Shipping Assembly Specifications

Table 2.1 Shipping Assembly Specifications

Shipping Assembly Specifications	
Weight	6337 kg (13970 lb.)
Center of gravity (A)	2690 mm (105.9 in.)
Length (B)	6005 mm (236.4 in.)
Height (C)	2481 mm (97.7 in.)

### DANGER

Be sure forks are secure before moving away from load. Stand clear when lifting.

1. Approach the windrower from the hood end and slide the forks underneath the lifting framework.
2. Raise the windrower off the platform and move it to the assembly area.

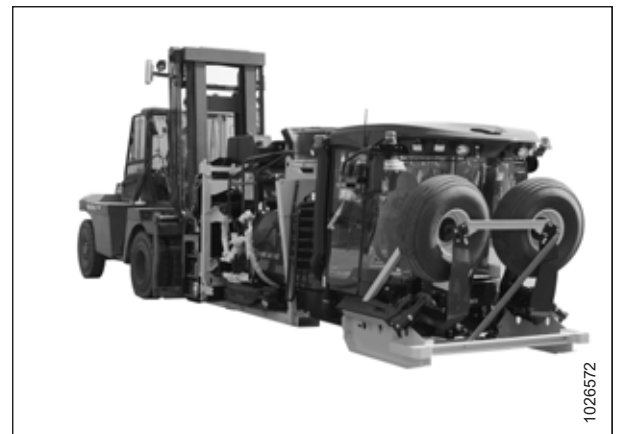


Figure 2.7: Forklift Method Lifting Points

## UNLOADING WINDROWER

3. Lower the windrower onto 152 mm (6 in.) blocks (A) as shown.
4. Check for shipping damage and missing parts.
5. Proceed to [2.3 Removing Caster Wheel Shipping Assembly](#), [page 23](#).

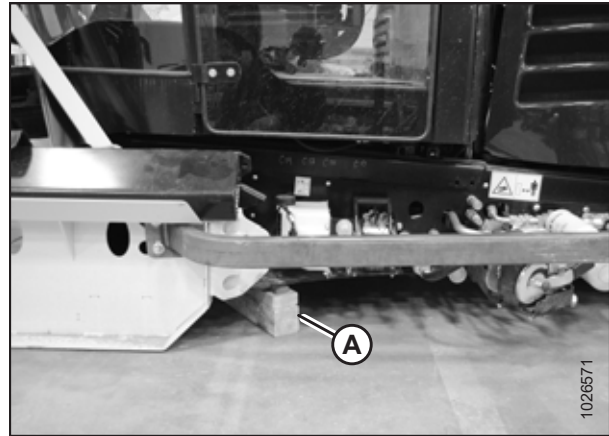


Figure 2.8: Windrower Shipping Assembly on Blocks



## 2.3 Removing Caster Wheel Shipping Assembly

The caster wheels are assembled together for shipping purposes. This shipping assembly needs to be pulled away from the windrower.

1. Locate caster wheel shipping assembly (A).

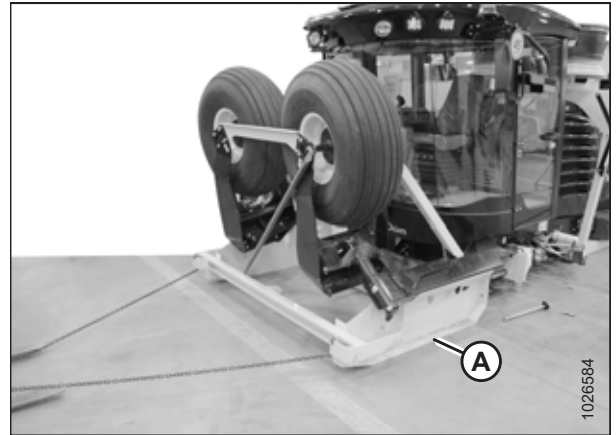


Figure 2.9: Caster Wheel Assembly

2. Remove shipping wire (A) securing center-link (B).

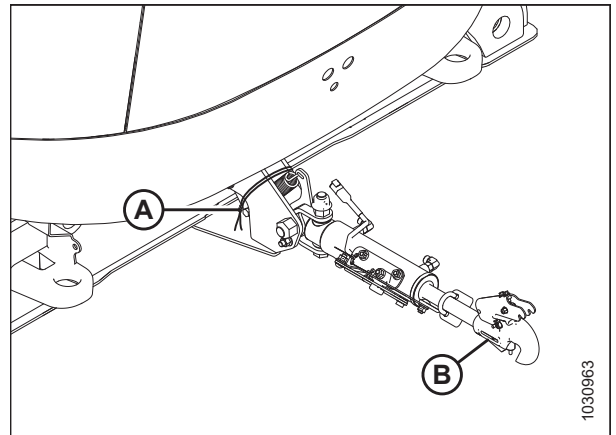


Figure 2.10: Center-Link

3. Disconnect center-link (A), and discard the pin and hardware (B).

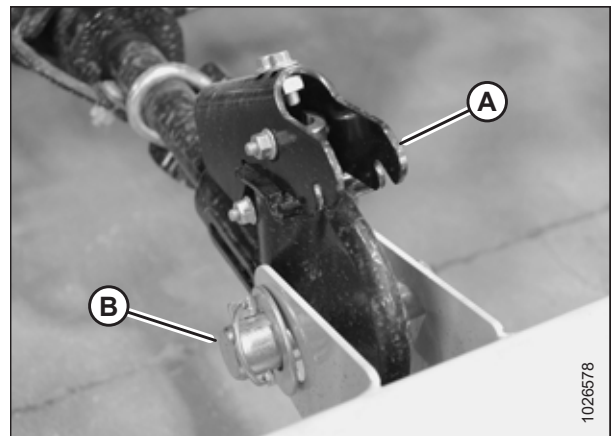


Figure 2.11: Center-Link

## UNLOADING WINDROWER

4. Remove two front bolts (A), and three rear bolts (B), and remove coupler guard (C).

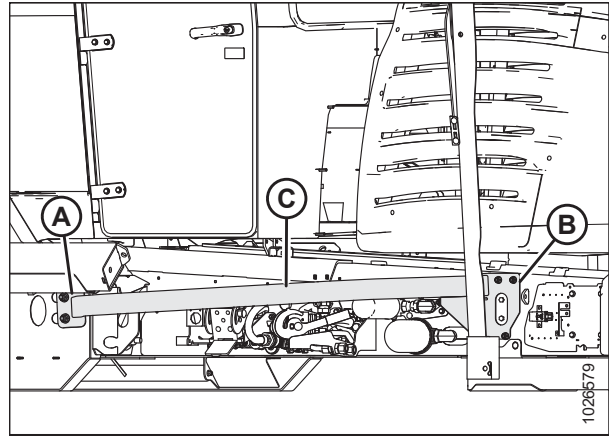


Figure 2.12: Coupler Guard

5. Remove leg pin bolts (A) from both sides, and retain caps (B) (two per side) for reuse.

**NOTE:**

If you will be moving the windrower shipping assembly with a crane, retain the leg pin bolts and nuts for reinstallation.

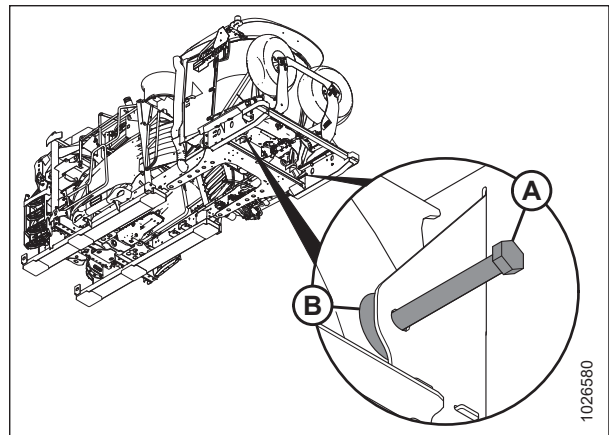


Figure 2.13: Leg Pin Bolts and Caps

6. Remove two bolts (A) securing front the skids to lifting plates (B) on each side.

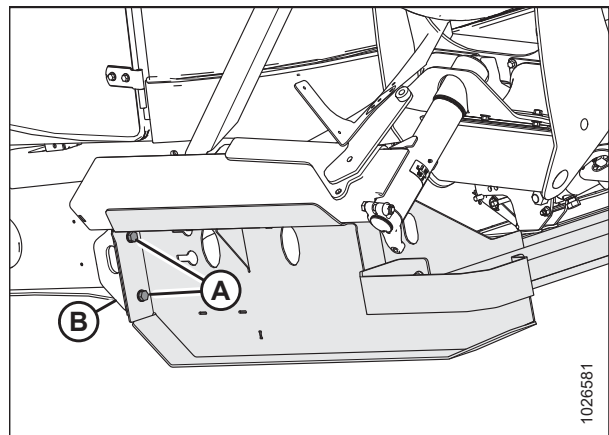


Figure 2.14: Front Skid Bolts

## UNLOADING WINDROWER

7. Ensuring that the center-link does **NOT** snag the front skids, use chains or cables to drag caster wheel shipping assembly (A) away from the windrower.

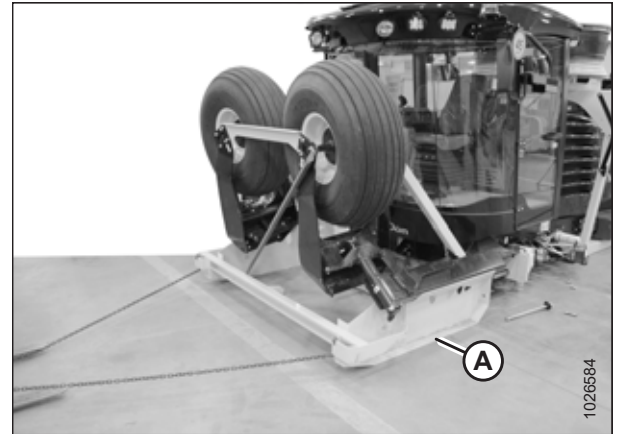


Figure 2.15: Caster Wheel Assembly

8. If planning to lift the windrower onto the assembly stands using a crane in the procedure [3.1 Lifting Windrower onto Assembly Stand \(MD #B9064\), page 39](#): reinstall wheel leg pin bolts (A), caps (B), and nuts (C) to secure lifting plates (D) on both sides.

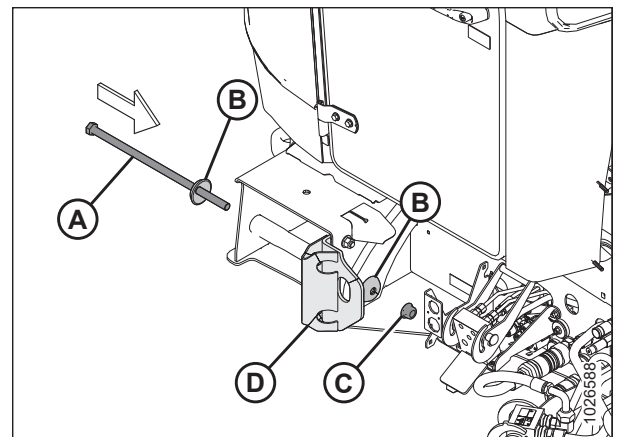


Figure 2.16: Reinstalling Leg Pin Bolt – Crane Lift Only

9. If planning to lift the windrower onto the assembly stands with a forklift in the procedure [3.1 Lifting Windrower onto Assembly Stand \(MD #B9064\), page 39](#): remove bolt (A) from lifting plate (C), slide pin (B) out and retain for reuse. Remove lifting plates (C) on both sides.

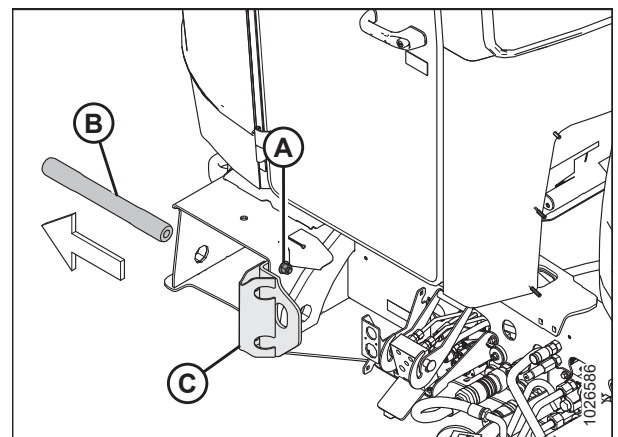


Figure 2.17: Removing Lifting Plates

## 2.4 Removing Fuel Tank / Right Platform Shipping Assembly

Follow these instructions to remove the handrails, fuel tank, right platform, and platform stairs.

1. On the right side of the machine, remove shipping straps and wires (A) from handrails (B) and from the hydraulic hoses. Set the hoses down beside the machine.

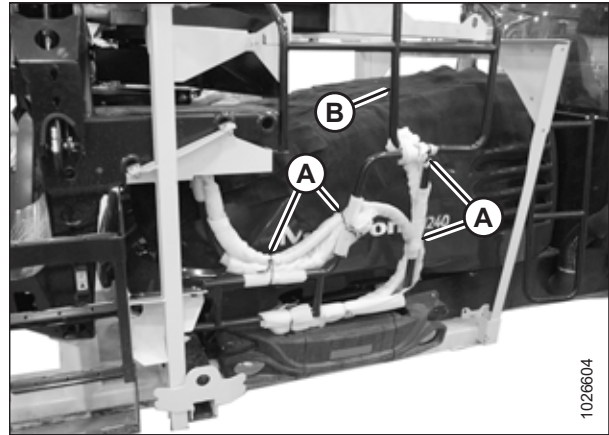


Figure 2.18: Handrails on Right Side

2. Supporting upper handrail (A), remove three bolts (B) securing the handrail to the upper shipping support, and then set the handrail aside.
3. Supporting lower handrail (C), remove three bolts (D), and then set the handrail aside.

**IMPORTANT:**

Use care to prevent handrail (C) from contacting and scratching the hood.

4. Supporting handrail (E), remove two bolts (F), and then set the handrail aside. Retain the bolts.

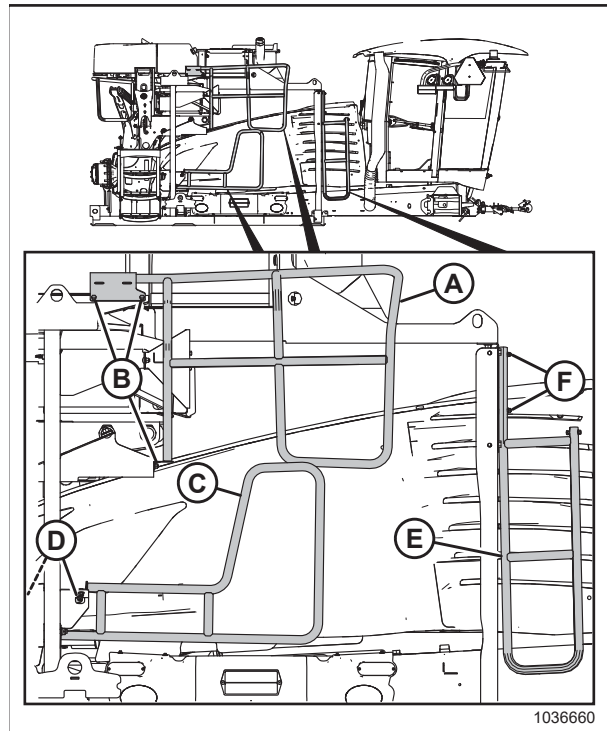
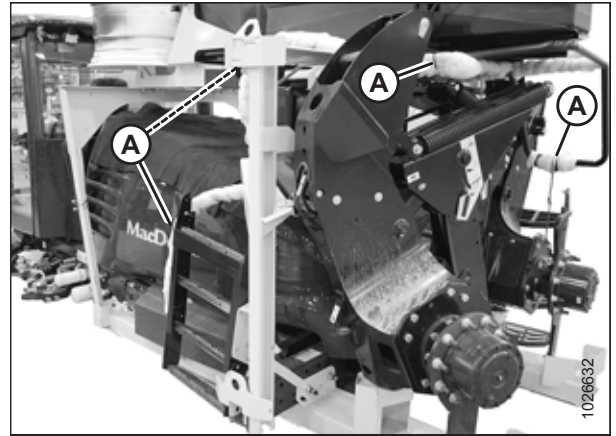


Figure 2.19: Handrails on Right Side

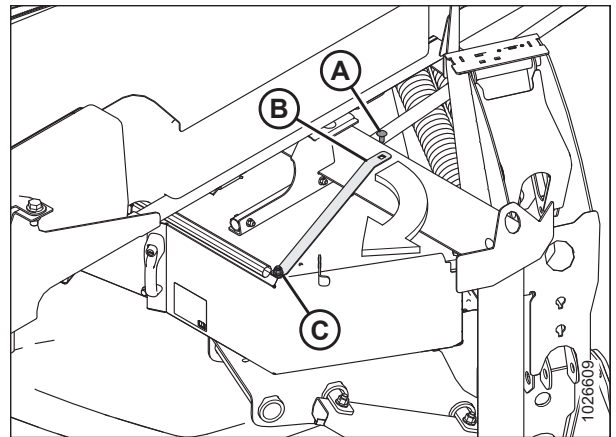
## UNLOADING WINDROWER

5. On the rear and right sides of the machine, cut remaining shipping wires (A) securing the railings and hydraulic hoses.



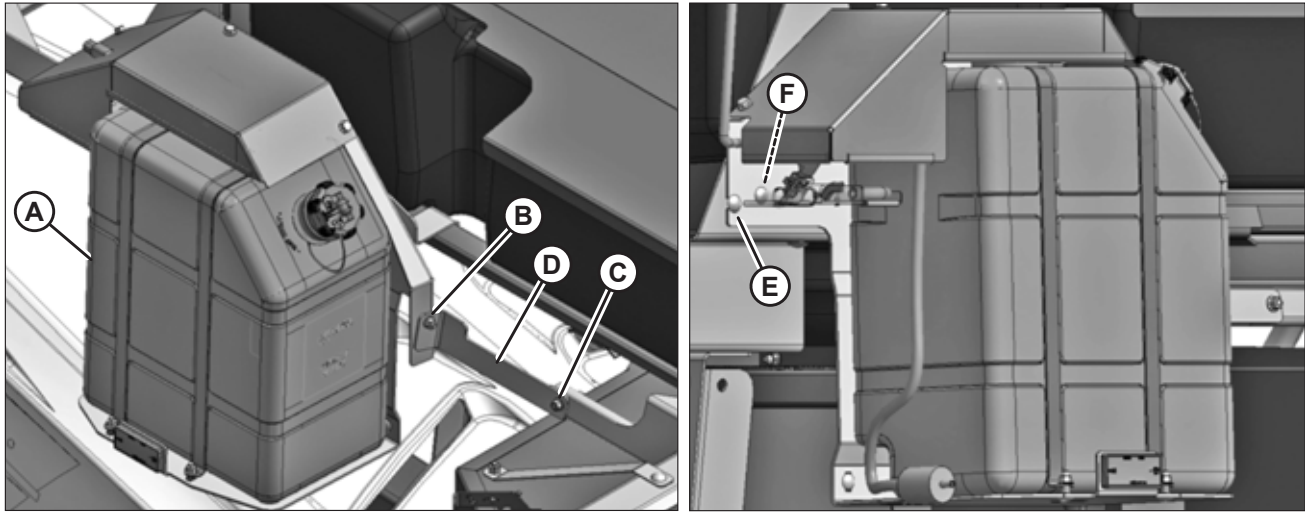
**Figure 2.20: Shipping Wire Locations**

6. On the left side of the machine, remove bolt (A) securing strap (B) to the horizontal shipping brace. Loosen bolt (C) and rotate the strap away from the brace.



**Figure 2.21: Shipping Strap**

## UNLOADING WINDROWER

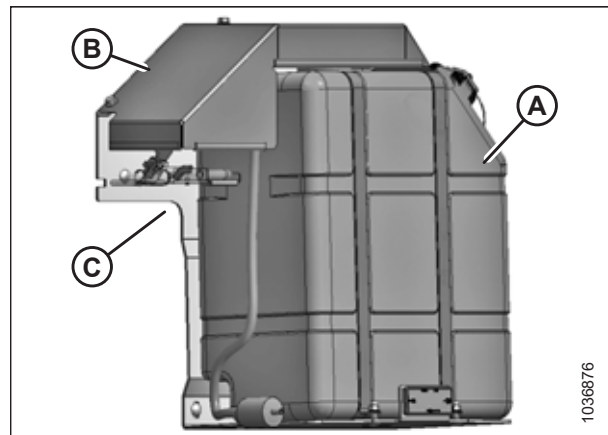


**Figure 2.22: DEF Tank**

7. Support the weight of the diesel exhaust fluid (DEF) tank assembly (A).
8. Remove and discard bolt and nuts (B). Remove bolt and nut (C). Discard shipping bracket (D). Reinstall bolt and nut (C) into the handrail.
9. Remove and discard bolt and nut (E).
10. Remove and **RETAIN** M10 x 20 carriage bolt, washer, and nut (F).
11. Set the DEF tank assembly aside.

**NOTE:**

The major parts of the assembly include tank (A), cover (B), and support bracket (C).



**Figure 2.23: DEF Tank Assembly**

## UNLOADING WINDROWER

12. With the lifting device positioned behind the windrower, secure the fuel tank assembly to the lifting device with three chains as follows:

**IMPORTANT:**

To avoid damaging the windrower, make sure the load is balanced.

- a. Attach 147 cm (58 in.) chain (A) to the right lifting point on the fuel tank shipping assembly.

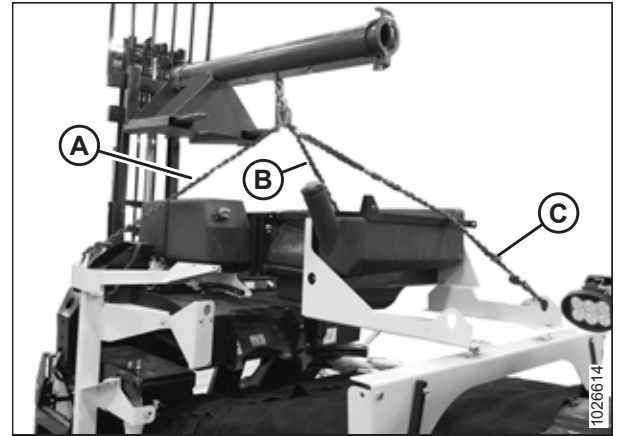
**IMPORTANT:**

Avoid snagging the fuel filler neck with the chain.

**NOTE:**

The exact appearance of the windrower may vary from the illustration.

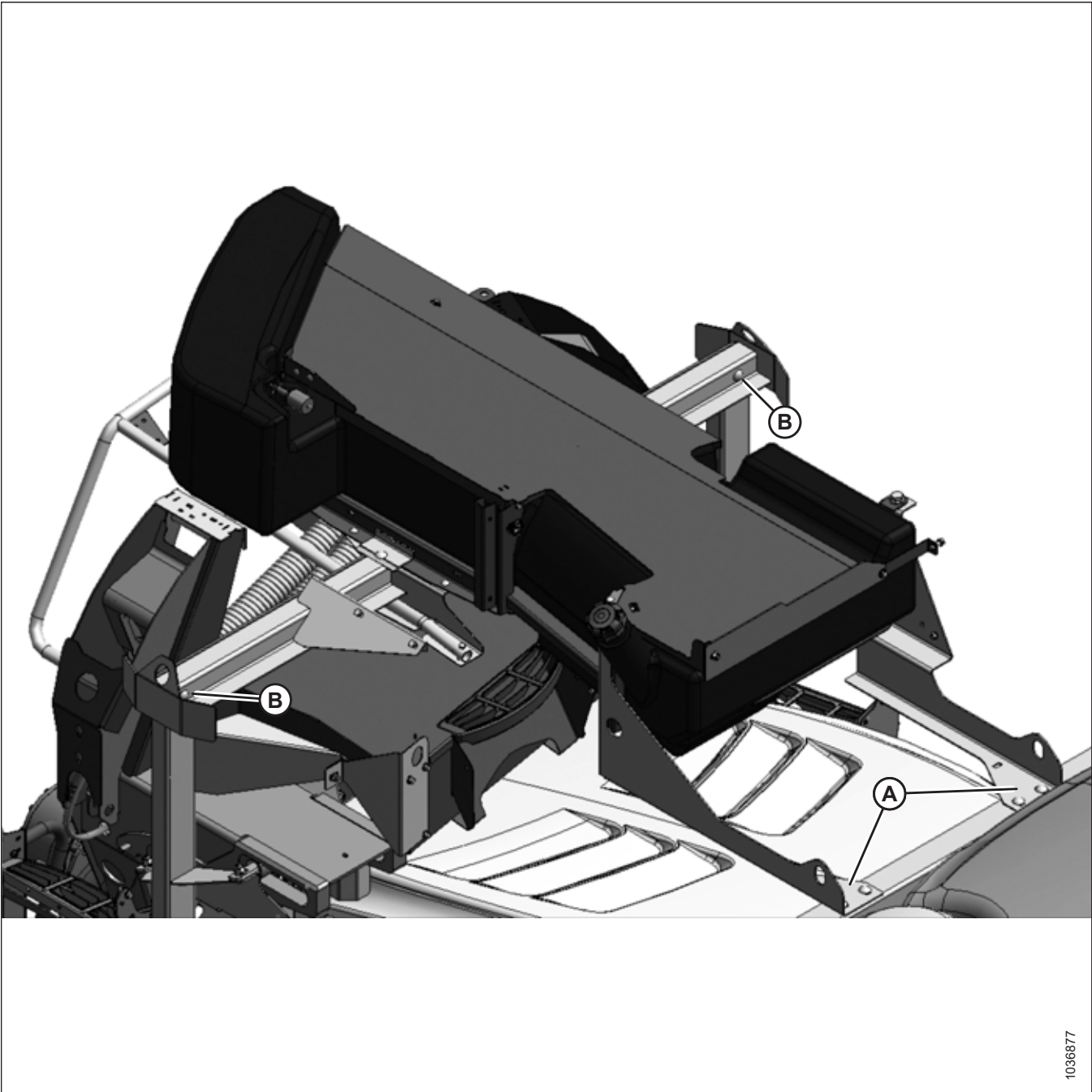
- b. Attach 145 cm (57 in.) chain (B) to the left lifting point on the fuel tank shipping assembly.
- c. Attach 189 cm (74.5 in.) chain (C) to the left front lifting point on the fuel tank shipping assembly.



**Figure 2.24: Lifting Points**



## UNLOADING WINDROWER



**Figure 2.25: DEF Tank**

13. Remove two bolts (A) securing the shipping assembly to the front horizontal brace.
14. Remove two bolts (B) securing the shipping assembly to the vertical side braces.
15. Before lifting, have a second person guide the assembly to prevent the assembly from contacting the windrower.



## UNLOADING WINDROWER

16. Slowly lift fuel tank shipping assembly (C) away from the windrower. Do **NOT** allow handrail (A) to contact wheel leg assemblies (B).

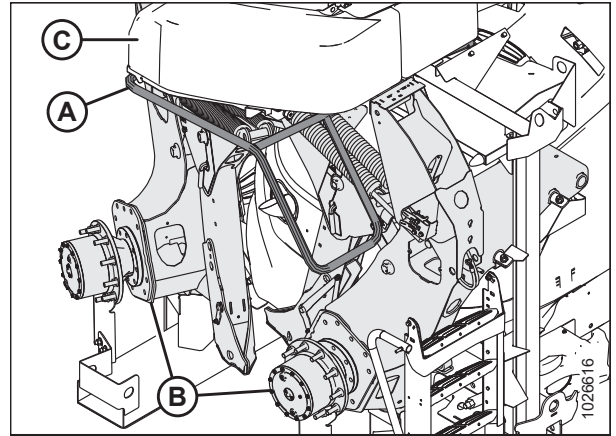


Figure 2.26: Handrail and Wheel Legs

17. With the fuel tank shipping assembly suspended off the ground, support handrail (A), remove and retain hardware (B), and then set the handrail aside. Keep the hardware with the handrail for installation.
18. Lower the fuel tank shipping assembly down onto 152 mm (6 in.) blocks to prevent damage to the fuel tank.

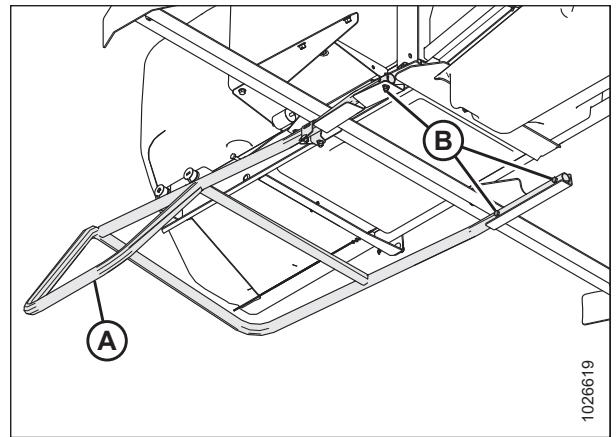


Figure 2.27: Handrail under Fuel Tank Shipping Assembly

19. Remove four bolts (A) and nuts that attach stairs (B) to the windrower shipping assembly. Set the stairs aside. Discard the four bolts and nuts. Repeat this step on the opposite side.

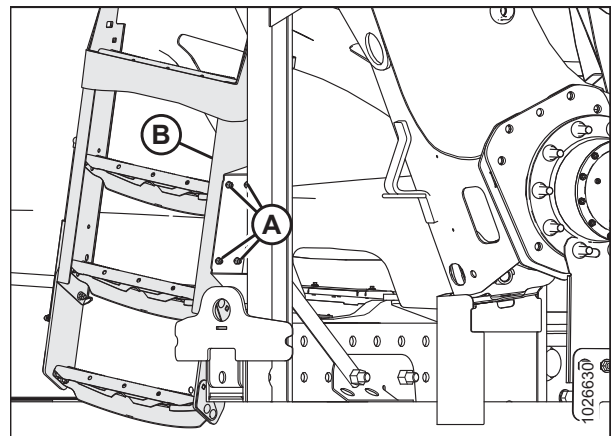


Figure 2.28: Left Platform Stairs

## 2.5 Removing Left Platform

Follow these instructions to remove the left platform. Some hardware is reused for assembly.

1. At the left shipping support, remove wire (A), nut, bolt, and bushing (B), and platform bar (C). Retain hardware (B) for reuse.

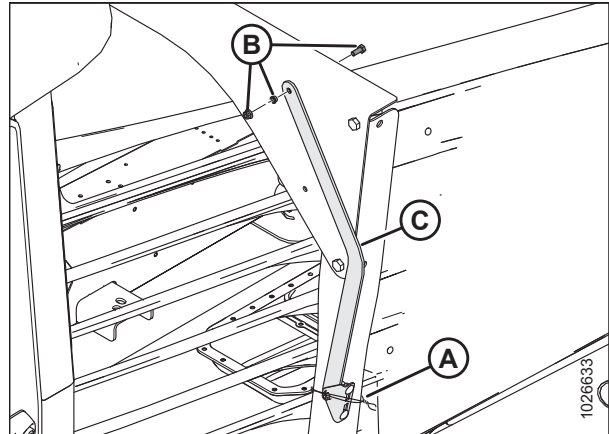


Figure 2.29: Platform Bar

2. Position the lifting device behind the windrower and attach straps or chains to lifting points (A) to support the left platform.

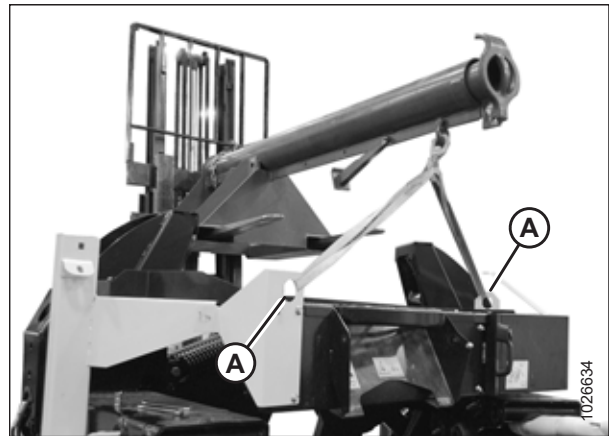


Figure 2.30: Supporting Left Platform

3. Remove nut (A) from long bolt (B) on the bottom left side of the platform. Retain nut (A). To prevent the tool box from falling out, leave long bolt (B) in place.

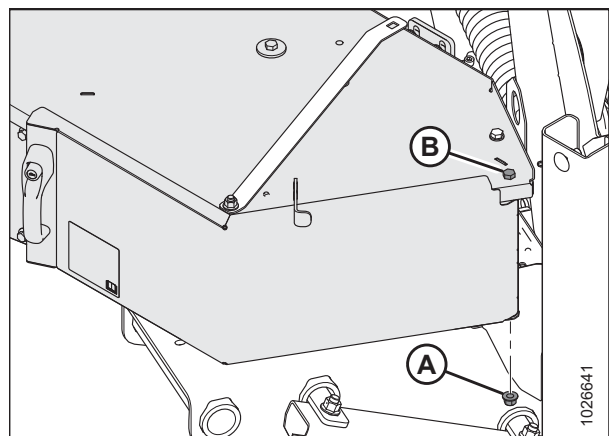
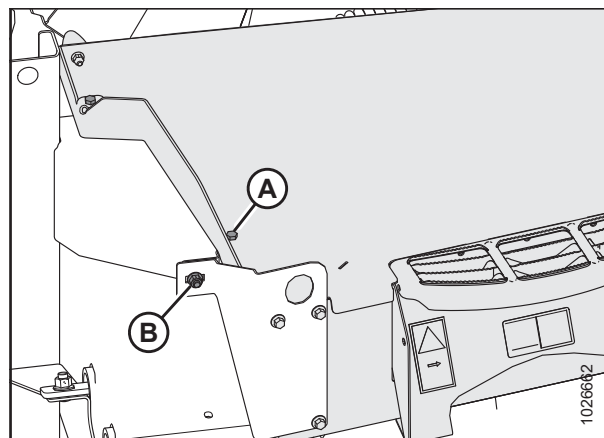


Figure 2.31: Left Platform on Left Side

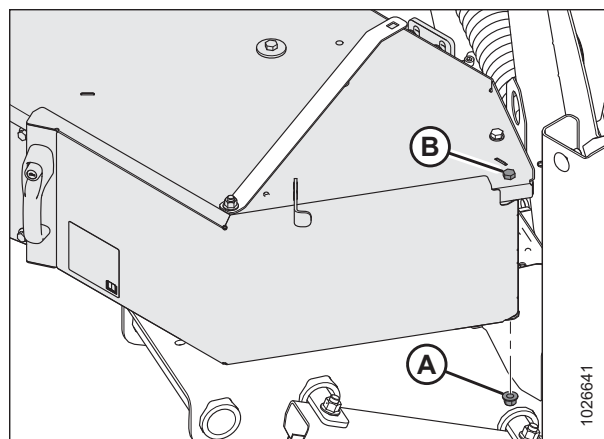
## UNLOADING WINDROWER

4. Remove and discard nuts and bolts (A) and (B).
5. Carefully lift the platform assembly off the frame, and set it down on a level surface.



**Figure 2.32: Left Platform – Right Side**

6. Reinstall nut (A) on retained long toolbox bolt (B).



**Figure 2.33: Left Platform**

## 2.6 Removing Wheel Leg Assemblies

Remove the wheel leg assemblies from their shipping locations and set them aside for installation.

### DANGER

The wheel leg assemblies are heavy and difficult to maneuver. Use a proper lifting device. Falling wheel leg assemblies can result in serious personal injury.

### CAUTION

Two people are required for this task: One person operates the lifting device while the other person helps to control the movement of the wheel leg assembly.

1. Position the lifting device to remove wheel leg (A) from the left side of the windrower first.

#### NOTE:

When configured for container shipments, the wheel legs are shipped with right leg (A) on the left side of the shipping assembly and left leg (B) on the right side.

2. Secure the hydraulic hoses to prevent them from damaging the windrower hood.

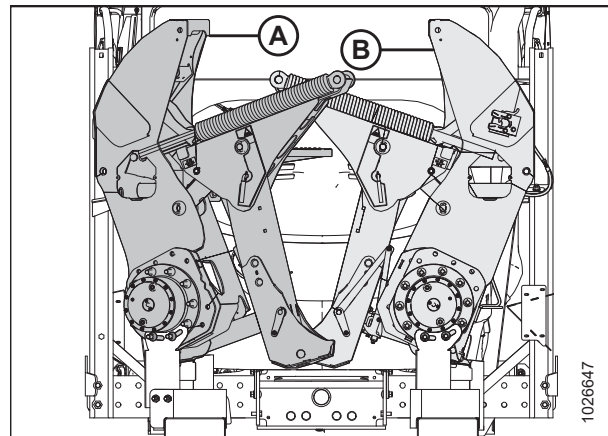


Figure 2.34: Leg Shipping Configuration

3. Feed lifting strap (A) through the top of the leg assembly. Position the strap so that the leg will be balanced. Position the strap so that it will **NOT** damage float sensor (B). Adjust the lifting device to support the leg.
4. To prevent damage to the leg assembly, lay down cardboard or rubber on the ground where the leg assembly will be set down.

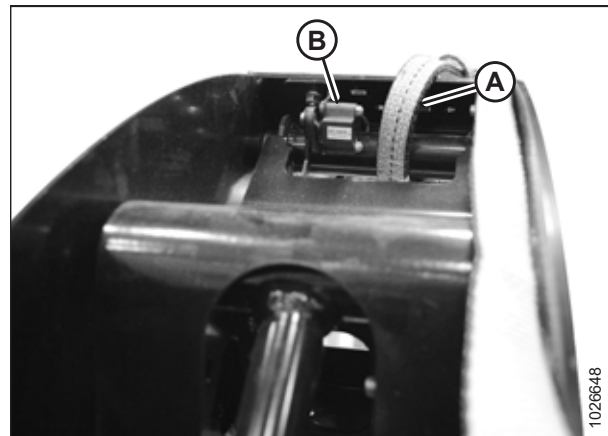


Figure 2.35: Attaching Lifting Strap

## UNLOADING WINDROWER

5. With the leg supported and a second person in place, remove two bolts (A) from the lower fork channel brace.
6. Remove and discard two nuts (B). Remove shipping support (C).

### IMPORTANT:

Do **NOT** reuse nuts (B) to install the drive wheels. The specified mounting nuts and installation instructions are shipped with the drive wheels.

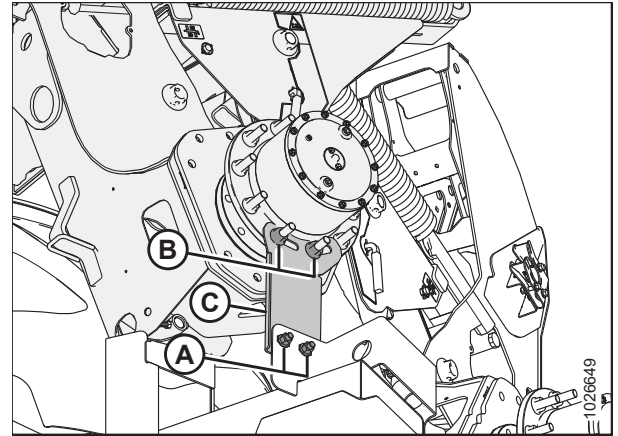


Figure 2.36: Wheel Leg on Left Side

7. Remove two bolts (A) and then pull the shipping bars out of the wheel leg members.

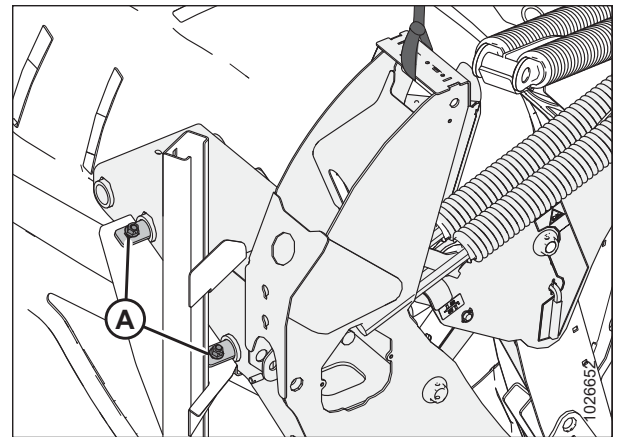


Figure 2.37: Wheel Leg on Left Side

8. Lift leg assembly (A) away from the windrower. Have a second person help control the movement of the leg assembly while it is being lifted away from the windrower.
9. Set the leg assembly onto level ground that is covered with cardboard or rubber.

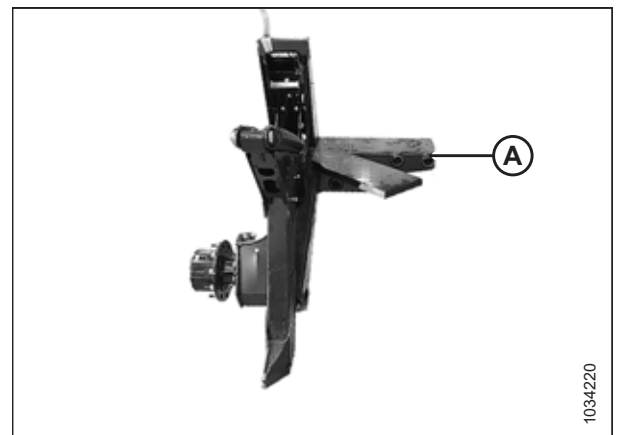
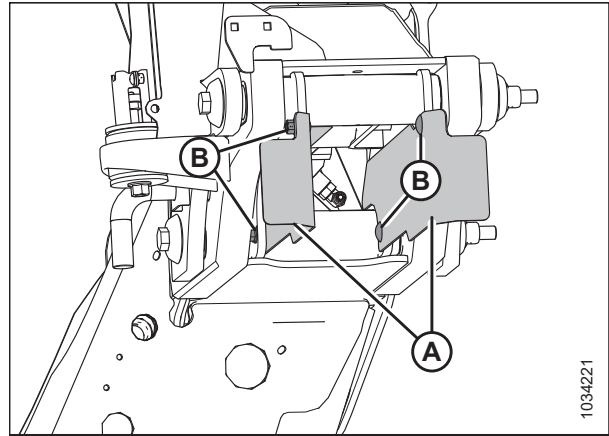


Figure 2.38: Right Leg Assembly on the Ground

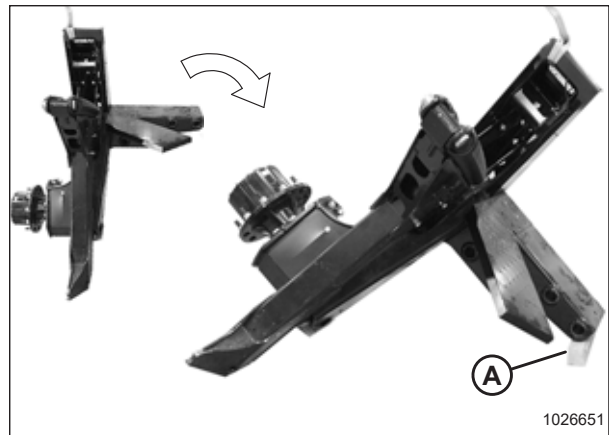
## UNLOADING WINDROWER

10. Retrieve internal hose guard brackets (A) from the cab, and install them as shown using M12 bolts and nuts (B).



**Figure 2.39: Right Drive Leg Hose Guard**

11. Lay the leg down as shown with the leg member on block (A).
12. Repeat this procedure for the right leg assembly.



**Figure 2.40: Lowering Right Leg Assembly**

## 2.7 Removing Upper Shipping Supports

Remove the specified shipping supports in preparation for windrower assembly.

1. Support the cross member behind the cab with a suitable lifting device.
2. Remove two bolts (A) and nuts on each side and then remove the cross member. Discard the bolts, nuts, and cross member.

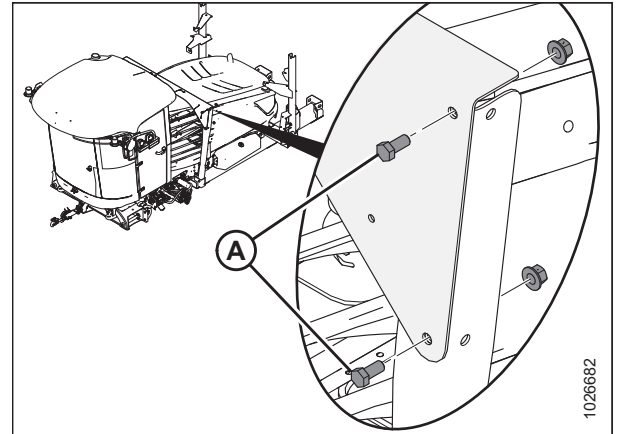


Figure 2.41: Forward Cross Member

3. Remove nut and bolt (A), and remove vertical support (B). Discard the nut, both, and vertical support. Repeat this step on the opposite side.

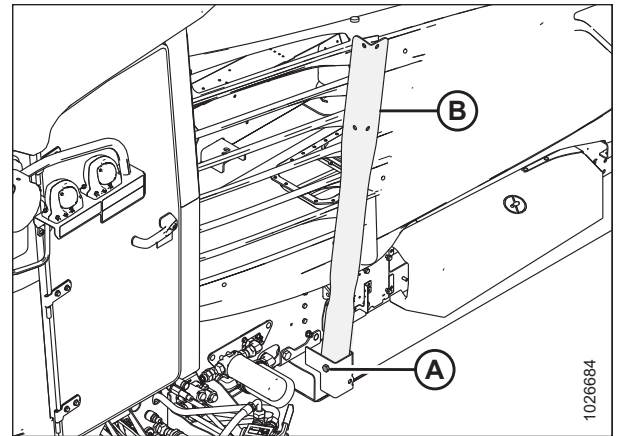
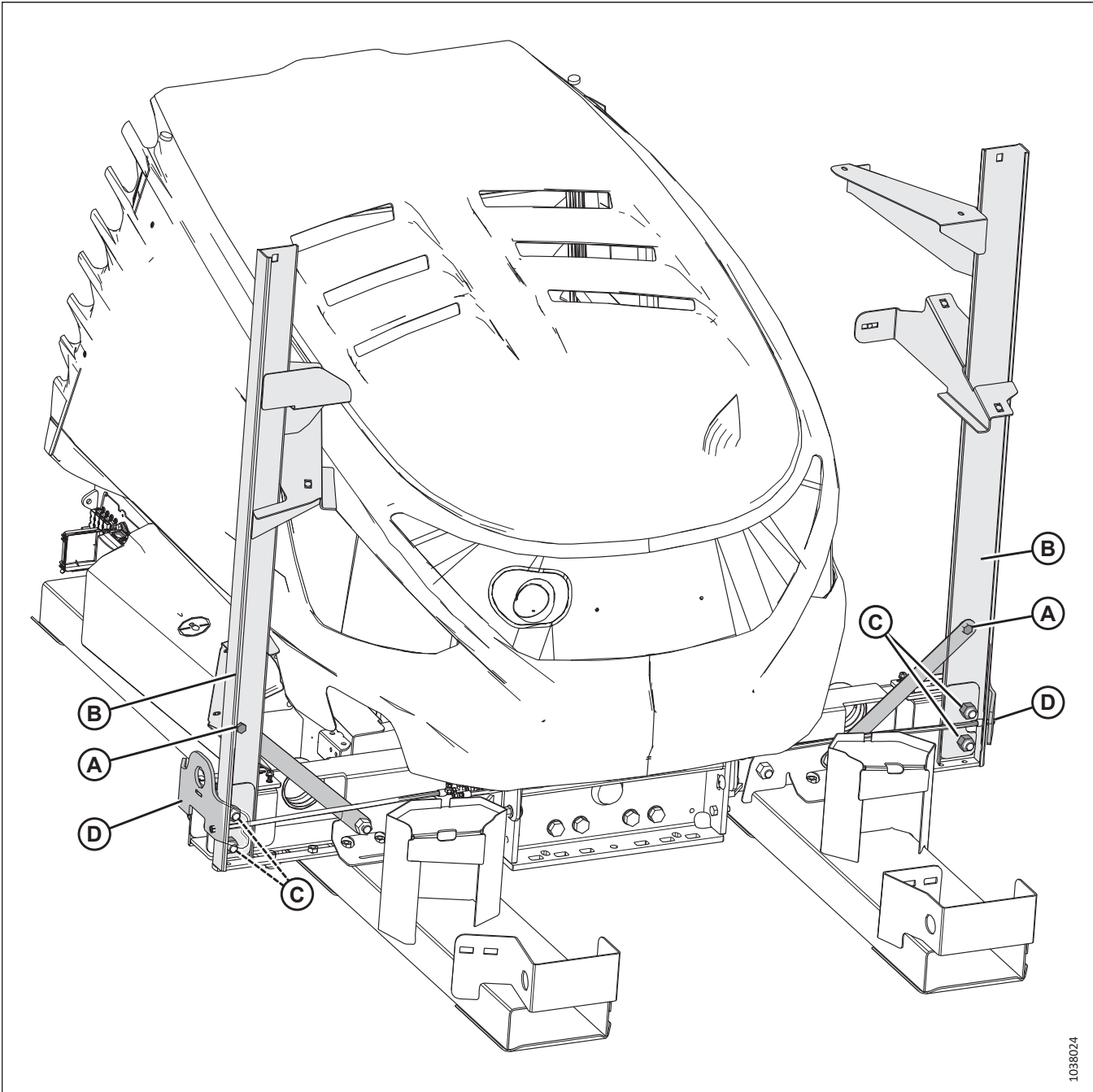


Figure 2.42: Forward Vertical Supports

## UNLOADING WINDROWER



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**Figure 2.43: Rear Vertical Channels and Lift Points**

4. Remove one nut and bolt (A) from each vertical channel (B). Discard the nuts and bolts.
5. Remove two nuts and bolts (C) from a vertical channel (B). Remove and discard the channel. Repeat this step for the other vertical channel.
6. **If planning to lift the windrower onto the assembly stands using a crane in the procedure [3.1 Lifting Windrower onto Assembly Stand \(MD #B9064\), page 39](#):** Reinstall lifting plates (D) using two bolts and nuts (C) per plate.
7. **If planning to lift the windrower onto the assembly stands with a forklift in the procedure [3.1 Lifting Windrower onto Assembly Stand \(MD #B9064\), page 39](#):** Discard nuts and bolts (C). Discard lifting plates (D).



## Chapter 3: Assembling Windrower

Once the various shipping assemblies have been unloaded and separated, the windrower can be assembled into field position.

### 3.1 Lifting Windrower onto Assembly Stand (MD #B9064)

The windrower must be assembled on a MacDon Export Assembly Stand (MD #B9064).



#### **DANGER**

To prevent injury to bystanders and to avoid striking them with machinery, do NOT allow people to stand in the unloading area.

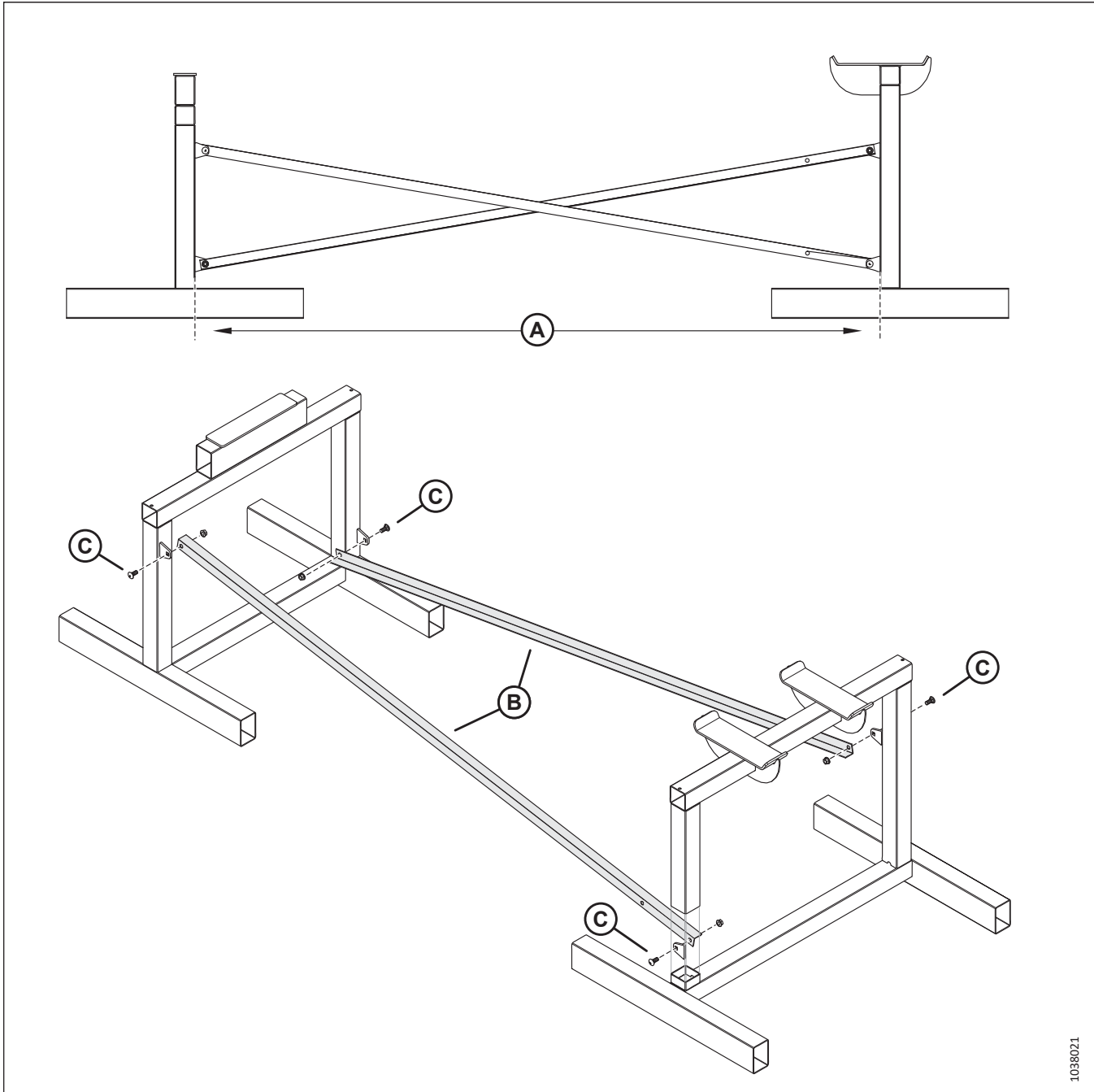


#### **DANGER**

The equipment used for loading or unloading a header must meet or exceed the requirements specified in this document. Using inadequate equipment may result in chain breakage, vehicle tipping, machine damage or bodily harm to operators or bystanders.

1. Before lifting the windrower onto an assembly stand, make sure the lifting device meets or exceeds the specified requirements. For the lifting requirements, refer to the topics:
  - If lifting with a forklift, refer to [2.2.2 Moving Windrower to Assembly Area – Forklift Method, page 20](#)
  - If lifting with a crane, refer to [2.2.1 Moving Windrower to Assembly Area – Crane Method, page 18](#)

## ASSEMBLING WINDROWER

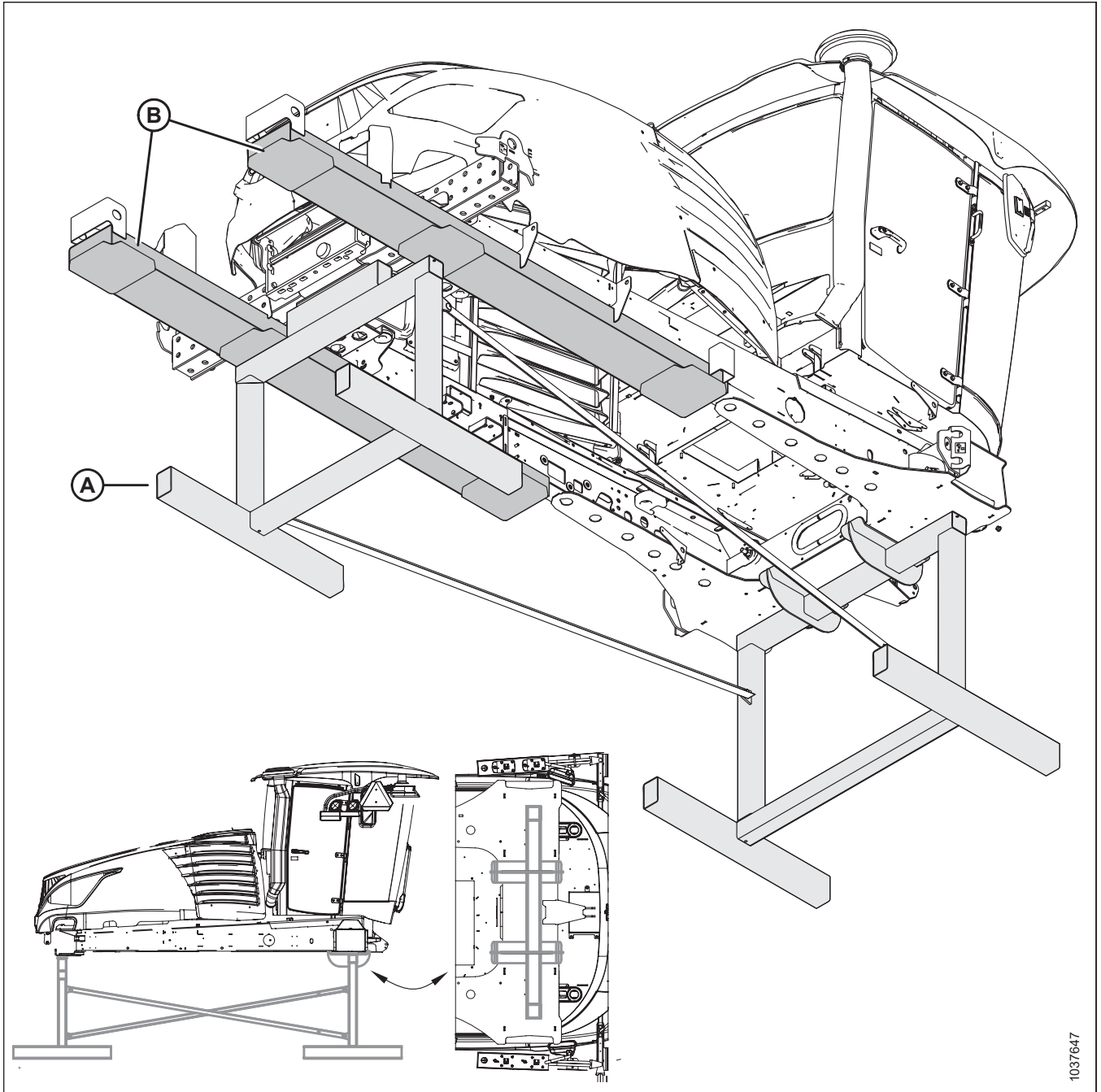


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**Figure 3.1: Assembly Stand Setup**

2. Set the assembly stands on level ground.
3. Space the stands out so that dimension (A) is 3470 mm (136 5/8 in.).
4. Attach diagonal angles (B) to the stands using a 5/8 x 1.5 in. bolt and nut at locations (C).
5. Torque the nuts to 153 Nm (113 lbf·ft).

## ASSEMBLING WINDROWER



**Figure 3.2: Windrower on Assembly Stands**

6. Lift the windrower onto the assembly stand. Position the windrower so that you can remove fork channels (B) with a forklift, without contacting front stand (A).

## 3.2 Removing Remaining Items from Shipping Configuration

With the windrower on the assembly lift stand, remove the rear lighting bezel, cab suspension shipping supports, and fork channels.

1. On the right side of the machine, remove two bolts (A) securing the rear lighting bezel, and then remove the bezel. Retain two nuts for installation, but discard the bolts.

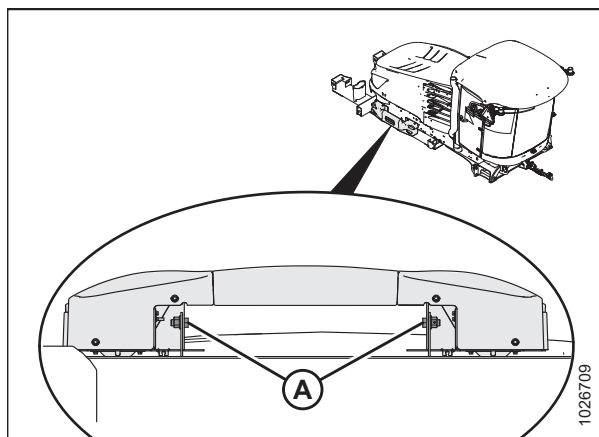


Figure 3.3: Rear Light Bezel

2. Remove two bolts and nuts (A), and cab suspension shipping support (B) from below the front cab. Discard the bolts and nuts. Repeat this step on the opposite side.

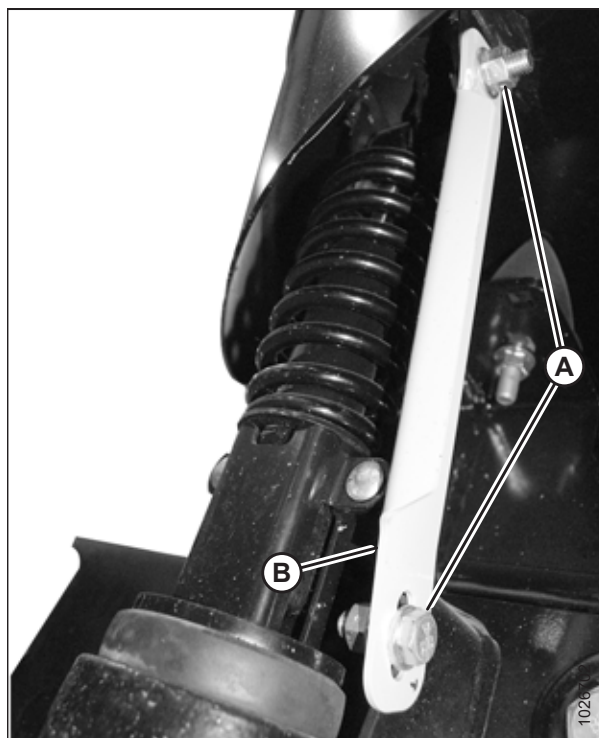


Figure 3.4: Right Cab Suspension Support

## ASSEMBLING WINDROWER

3. **If the windrower was lifted onto the assembly stands using a crane:** Remove two bolts and nuts (A) attaching lifting plate (B) to the walking beam. Discard the bolts, nuts, and plate. Repeat this step for the lifting plate on the opposite side of the walking beam.

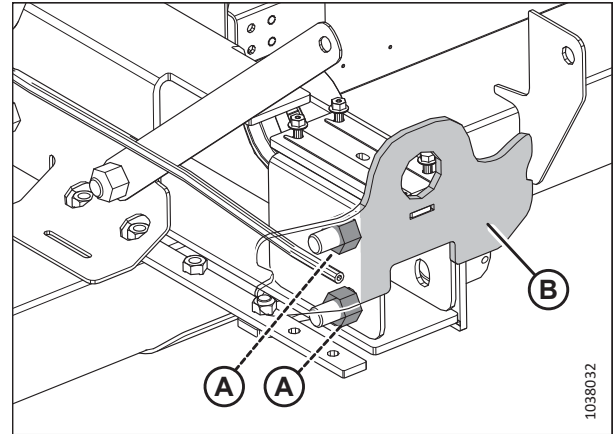


Figure 3.5: Lifting Plate

4. Support fork channel (A) with suitable lifting device (B), and remove two bolts and nuts (C), and four washers (D), from the walking beam. Discard the nuts, bolts, and washers.

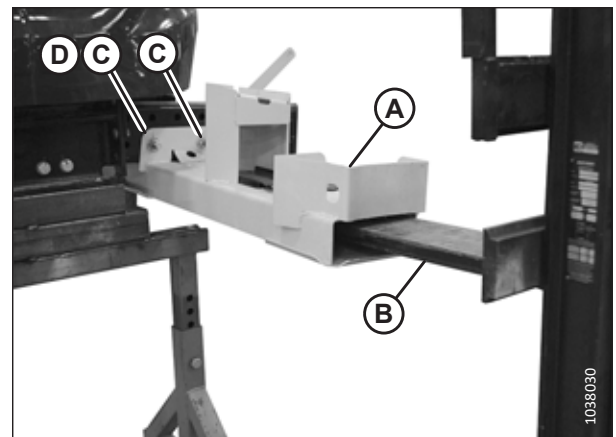


Figure 3.6: Supporting Fork Channel

5. At the side of the machine, remove bolt (A) and nut from the forward end of fork channel (B). Discard the bolt and nut.
6. Ensuring that the fork channel does not snag on the hoses and harnesses, move the fork channel away from the windrower.
7. Repeat Step 4, [page 43](#) to Step 6, [page 43](#) on the opposite side.

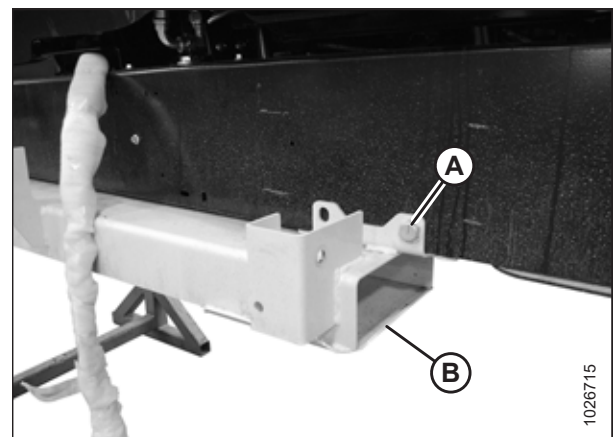


Figure 3.7: Fork Channel

### 3.3 Installing Wheel Legs

The right and left wheel legs are large components that must be installed before assembling the windrower any further.

#### DANGER

The wheel leg assemblies are heavy and difficult to maneuver. Use a proper lifting device. Falling wheel leg assemblies can result in serious personal injury.

#### CAUTION

Two people are required for this task: One person operates the lifting device while the other person helps to control the movement of the wheel leg assembly.

1. Remove inboard leg bolt, nut, two caps, and pin (A). Retain these parts for installing the wheel leg.
2. **If the windrower was lifted onto the assembly stands with a forklift:** Retrieve outboard leg bolt, nut, two caps, and pin (B) that was removed previously. Proceed to Step 5, [page 44](#).
3. **If the windrower was lifted onto the assembly stands with a crane:** Remove outboard bolt, nut, two caps, and pin (B). Retain these parts for installing the wheel leg.
4. **If the windrower was lifted onto the assembly stands with a crane:** Remove and discard carriage bolt (C) and lifting plate (D).
5. Remove the shipping material from the hydraulic and electrical bundle on the wheel leg.
6. Attach lifting strap (A) to the top of the wheel leg, and use a suitable lifting device to stand it upright.

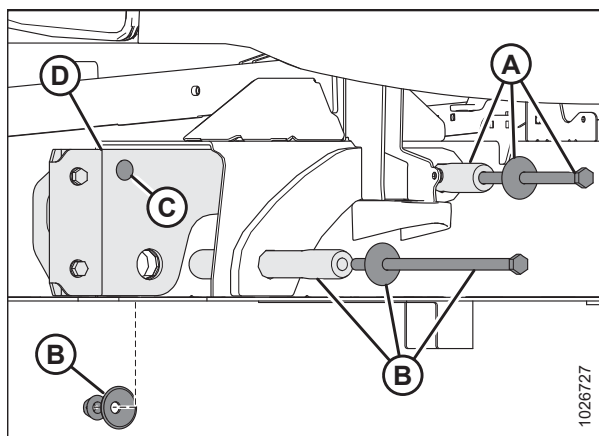


Figure 3.8: Wheel Leg Pins

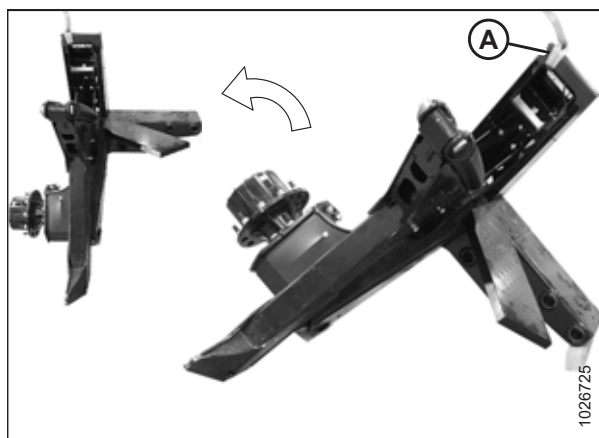


Figure 3.9: Wheel Leg

## ASSEMBLING WINDROWER

**NOTE:**

Ensure strap (A) will not hit sensor (B) when lifting the leg.

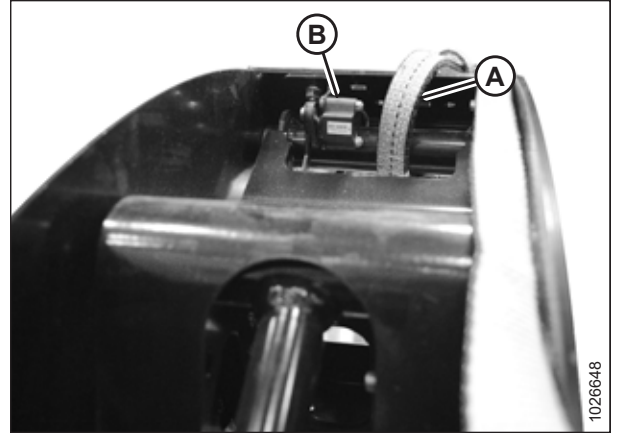


Figure 3.10: Top of Wheel Leg

7. Move the wheel leg into position next to the windrower and feed hydraulic hose and electrical bundle (A) into frame (B).

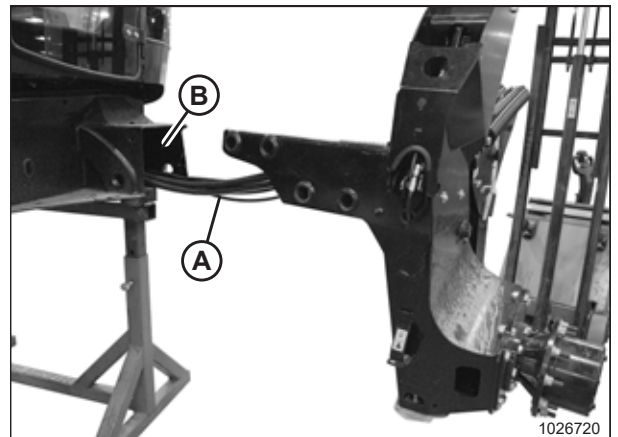


Figure 3.11: Hydraulic Hose Bundle

8. Feed bundle (A) through the hole below the windrower at the center of the frame.

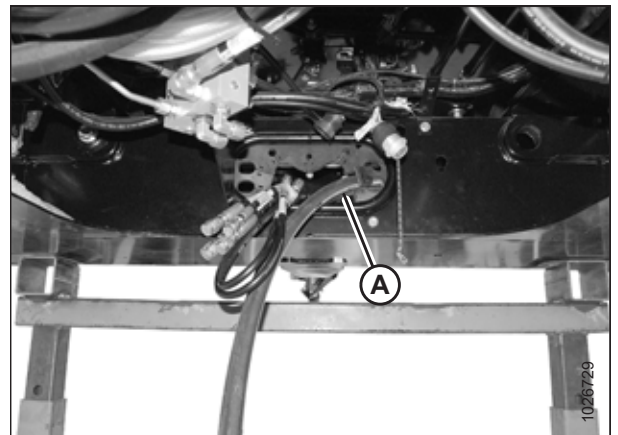


Figure 3.12: Hydraulic and Electrical Bundle

## ASSEMBLING WINDROWER

9. Ensure bushings (A) are seated into the internal mechanism in each slot on the leg.

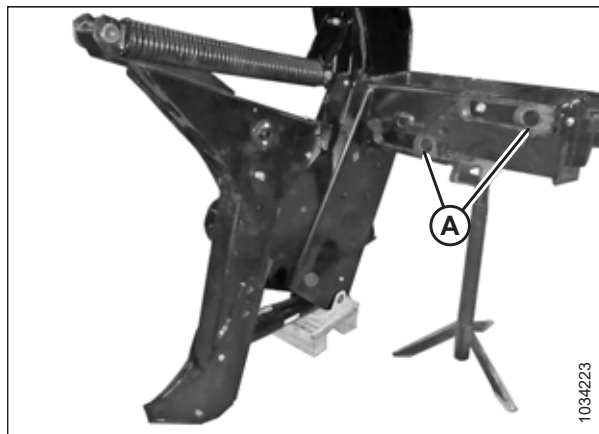


Figure 3.13: Leg Position on Frame

10. Insert the leg into the frame. Line up the holes in the bushings with the holes in the frame.
11. Insert pins (A) in the holes, then install long bolts (B), caps (C), and nuts (D) to secure the leg and frame. Torque the hardware to 136 Nm (100 lbf-ft).

**NOTE:**

If necessary, use a pry bar to align the holes.

12. Repeat Step 1, page 44 to Step 12, page 46 for the opposite wheel leg.

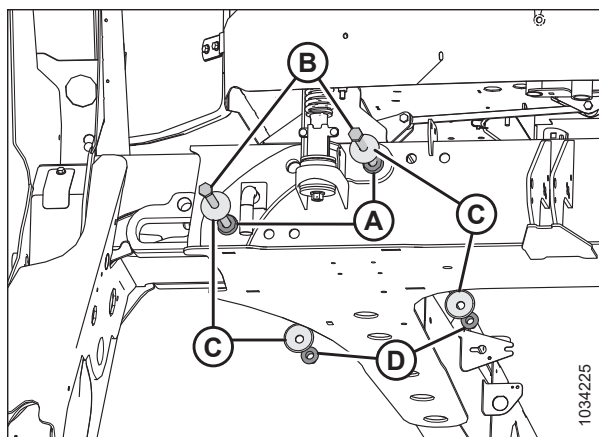


Figure 3.14: Leg Position on Frame

13. Remove lynch pin (A) and clevis pin (B) from the lift linkages on both wheel legs.

**IMPORTANT:**

Failure to remove the clevis pin from the linkage can result in damage to the linkage.

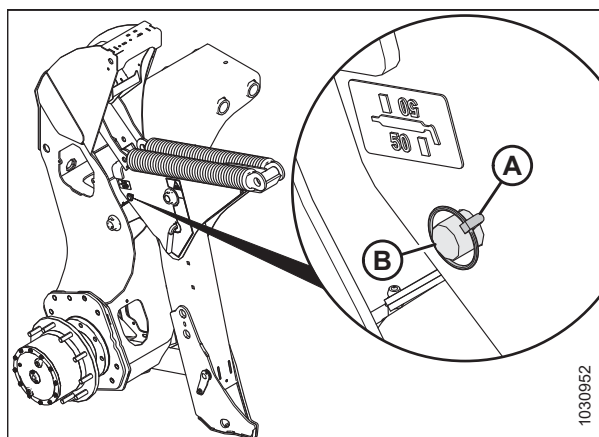


Figure 3.15: Header Lift Linkage Shipping Pin



### 3.4 Installing Drive Wheels

Be sure to check the wheel nut torque again once the windrower has begun operation.

#### CAUTION

Use a lifting device capable of supporting a minimum of 907 kg (2000 lb.) to lift the wheel assembly.

1. Retrieve windrower keys (A) from inside the chassis multiplexed Vehicle Electrical Center (mVEC), and retrieve the bag of wheel nuts from behind the operator's seat.
2. Clean the mounting surface on the wheel drive and the rim.
3. For 540-65R30 tires, install the spacer on the wheel drive.

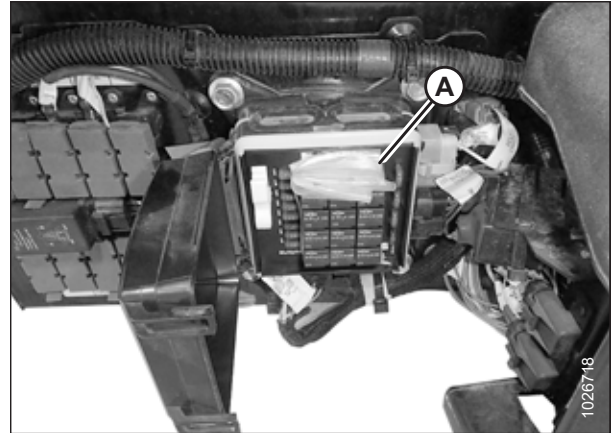


Figure 3.16: Windrower Keys Inside mVEC

4. **M1170N75 Windrowers sold in Germany:** If replacing a rim on a windrower equipped with a secondary set of brakes, remove the spacer plate as follows:
  - a. Remove two nuts (A) and bolts (C) attaching spacer plate (B) to the inside of the wheel rim.
  - b. Discard nuts (A), spacer plate (B), and bolts (C).

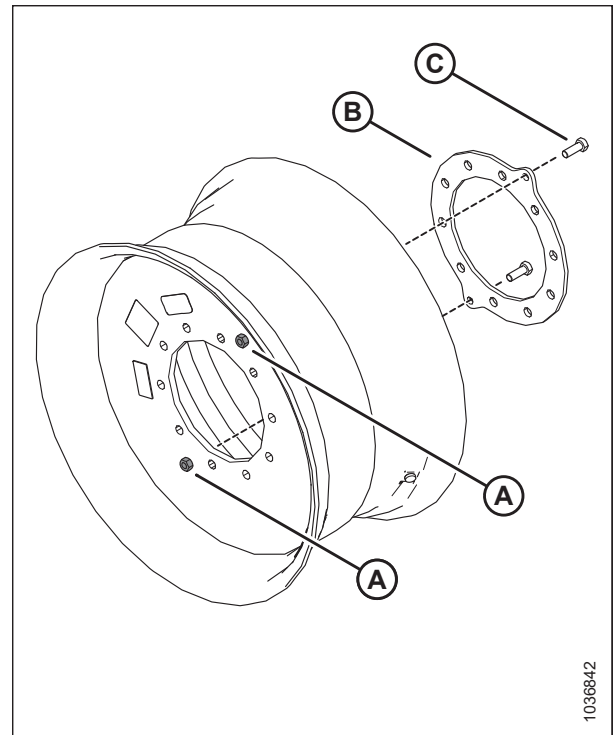


Figure 3.17: Drive Wheel

## ASSEMBLING WINDROWER

5. Position lifting device (A) under the wheel and raise the wheel slightly.
6. Position the wheel against the wheel drive hub so that air valve (B) is on the outside while tread (C) points cab-forward.

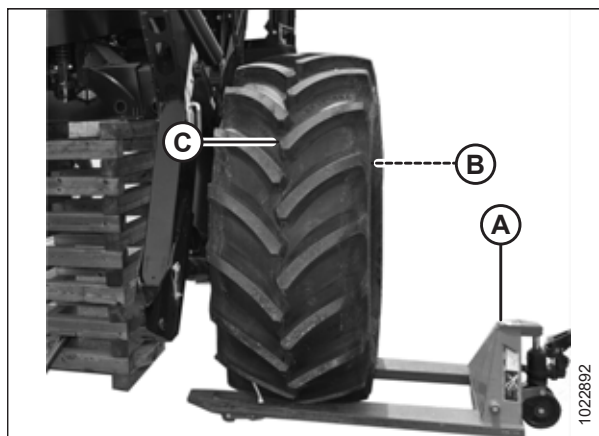


Figure 3.18: Drive Wheel Ready for Installation

7. Align the wheel rim with the studs on the hub. Push the wheel onto the hub.
8. Install and hand-tighten wheel nuts (A).

### IMPORTANT:

To avoid damage to the wheel rims and studs, do **NOT** use an impact wrench to tighten the nuts. The stud threads must be clean and dry. Do **NOT** apply lubricant or anti-seize compound to the stud threads. Do **NOT** overtighten the wheel nuts.

9. Torque the drive wheel nuts to 510 Nm (375 lbf-ft) using the tightening sequence shown.

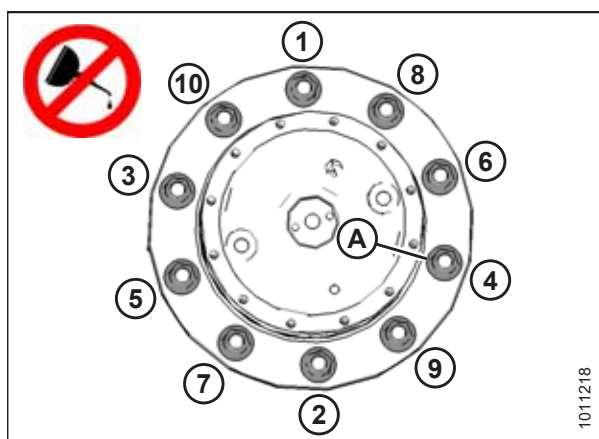


Figure 3.19: Tightening Sequence – 10-Bolt Wheel

10. Repeat the tightening sequence two additional times, ensuring that the specified torque is achieved each time.
11. Repeat Step 2, page 47 to Step 10, page 48 in order to install the right drive wheel.

### 3.5 Installing Caster Wheels

Caster wheels are non-driven wheels mounted at the end of the windrower near the engine.

1. Remove two bolts and nuts (A), and two rear wearplates (B) from the center support.

**NOTE:**

The hardware for mounting the rear wearplates to the walking beam is in a bag, secured to the rear wearplates, not shown in the illustration.

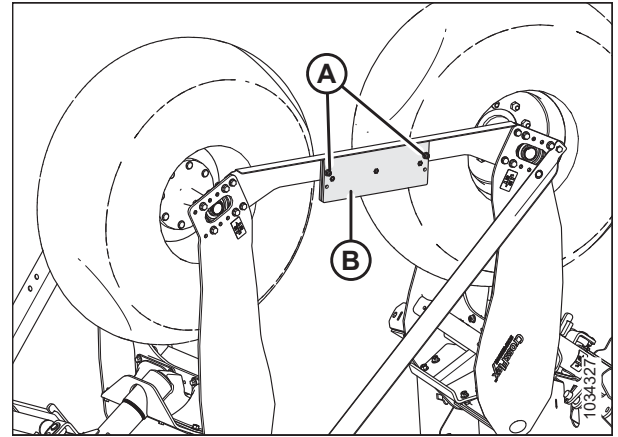


Figure 3.20: Caster Wheels Shipping Assembly

2. Position rear wearplate (A) inside wearplate mount (B) of walking beam (C) with the grease groove facing away from the wearplate mount. Secure with bolts (D), and torque to 43 Nm (32 lbf-ft).

**NOTE:**

Wearplate mount (B) is transparent in the illustration at right to show the rear wearplate.

3. Loosely install bolt with zerk (E) into the inboard hole. Do **NOT** torque until the p-clip is installed with hydraulics.
4. Repeat Step 2, page 49 to Step 3, page 49 at the opposite side.

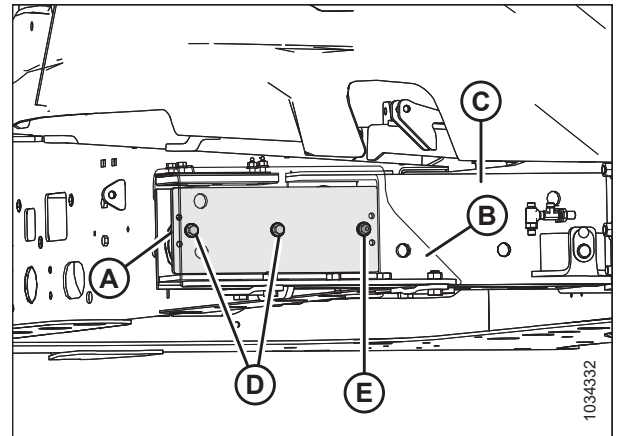


Figure 3.21: Rear Wearplate in Walking Beam — Left Side Shown

5. Mark shimmy shock mounts (B) and caster wheel extensions (C) that are on the same side of the shipping stand.
6. Remove bolts and nuts (A), and shimmy shock mounts (B) from the shipping stand. Retain for installation later.

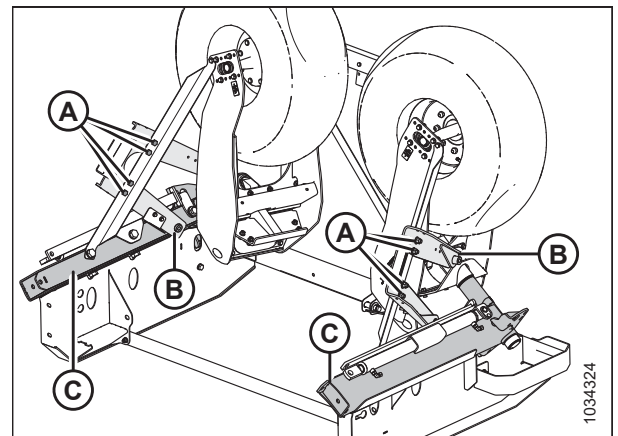


Figure 3.22: Anti-Shimmy Dampener Bracket

## ASSEMBLING WINDROWER

7. Remove the shipping wire and foam attaching narrow transport stop (A) to hydraulic cylinder (B). Place the narrow transport stop with the shimmy shock mounts removed from the same side of the shipping stand in Step 6, page 49.

### NOTE:

The shipping wire and foam are not shown in the illustration.

8. Remove and discard bolt (C) and shipping bracket (D) from caster wheel extension (E).
9. Remove and retain bolt and washers (F) securing the hydraulic cylinder pin to shipping bracket (G). Place the parts with the shimmy shock mounts previously removed from the same side of the shipping stand.
10. Remove hydraulic cylinder (B) and shipping bracket (A) from the caster wheel extension.
11. Remove cylinder pin (A), bolt (B), nut (C), pin strap (D) and shipping bracket (E). Retain all hardware and discard the shipping bracket.
12. Place the parts next to the previously removed shimmy shock mounts from the same side of the shipping stand.
13. Repeat Step 7, page 50 to Step 12, page 50 at the opposite side.

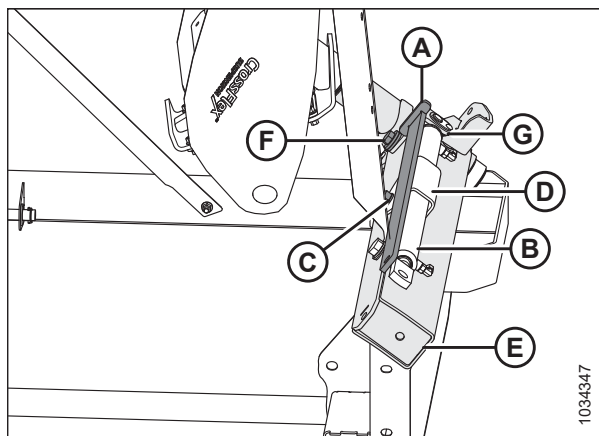


Figure 3.23: Right Narrow Transport Stop and Hydraulic Cylinder

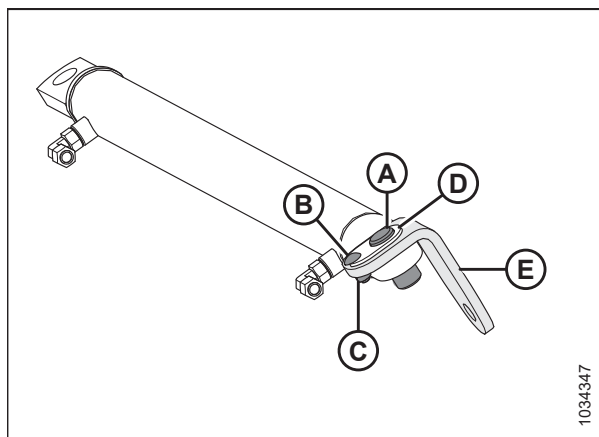


Figure 3.24: Pins and Shipping Bracket on Cylinder

### Installing right caster wheel

14. Using a suitable lifting device, support right caster wheel (A). Do **NOT** remove angled support (B).

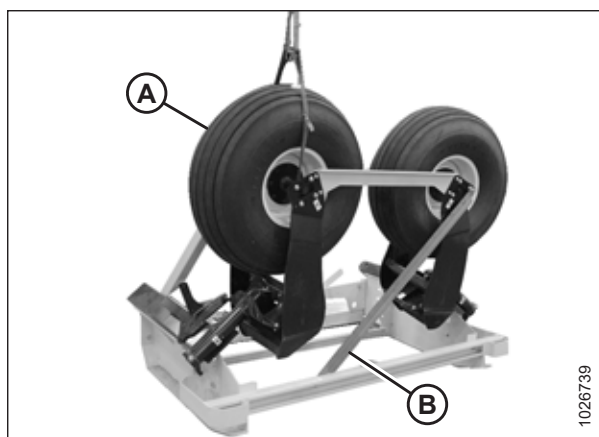
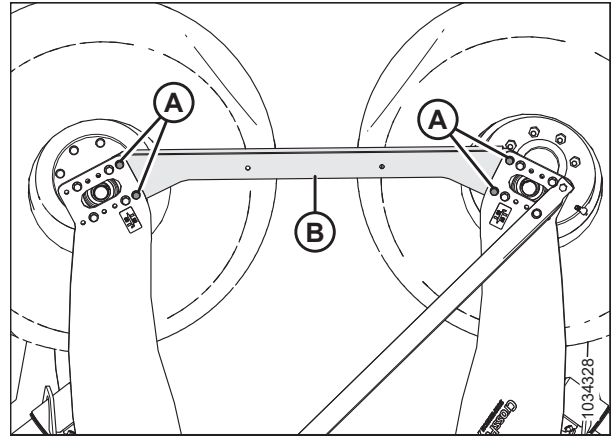


Figure 3.25: Caster Wheels Shipping Assembly

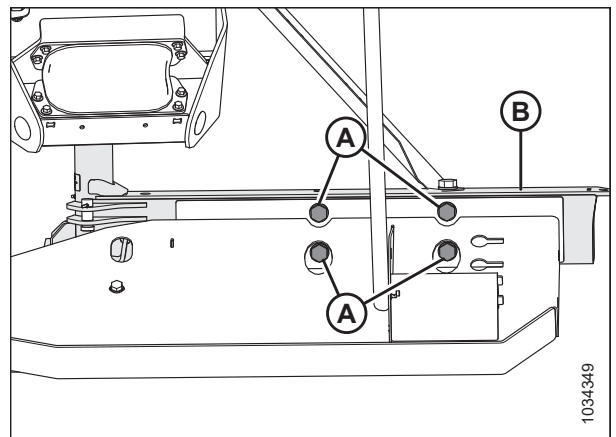
## ASSEMBLING WINDROWER

15. Remove and discard four bolts, washers, and nuts (A), and center support (B).



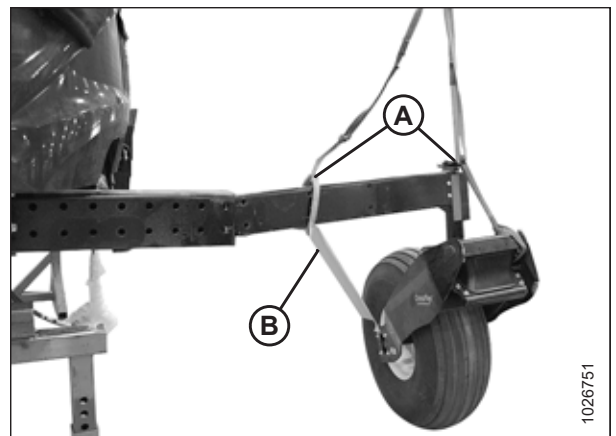
**Figure 3.26: Caster Wheels Shipping Assembly**

16. Remove four bolts and washers (A) securing caster wheel extension (B) to the shipping stand.
17. Lift the right caster wheel away from the shipping assembly and set it down on a smooth surface.



**Figure 3.27: Caster Wheel Extension on Shipping Stand – View from Under the Right Stand, Inboard**

18. Reposition lifting straps (A) around the caster wheel beam and shipping bracket (B), and then lift the wheel into position beside the walking beam.
19. Apply grease to the bottom of the caster wheel extension (that is, from the end of the extension to the shipping bracket).
20. Insert the caster wheel extension approximately 305 mm (12 in.) into the walking beam up to shipping bracket (B).



**Figure 3.28: Inserting Caster Wheel**

## ASSEMBLING WINDROWER

21. Remove and discard bolt, nut, and washer (A) securing shipping bracket (C) to the caster wheel.
22. Remove bolt and washer (B) and shipping bracket from the caster wheel extension. Retain the hardware.

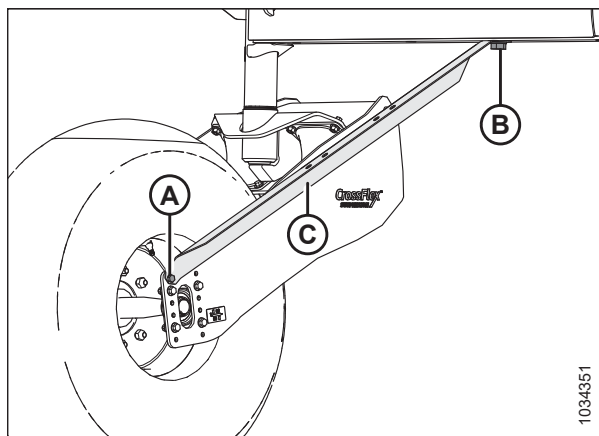


Figure 3.29: Caster Wheel Bracket

23. Insert narrow transport stop (A) through guide slot (B), as shown.
24. Secure narrow transport stop (A) to caster wheel extension (C) with bolt (D) and two washers (E) as shown. Torque to 330 Nm (243 lbf·ft), keeping the guide centered on the caster wheel extension.

**NOTE:**

Reuse the he bolt and washers retained from Step 9, page 50.

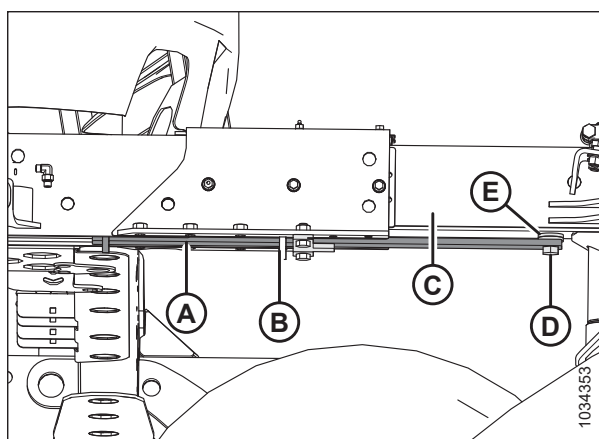


Figure 3.30: Narrow Transport Stop

25. Apply more grease to the bottom of the caster wheel extension and then insert caster wheel extension far enough to be able to move stop bracket (A) from storage position into field position as shown. For reference, the stop plate on the narrow transport stop should be approximately 340 mm (13 in.) (B) from the walking beam stop plate. This position will allow for optimal wear pad installation.

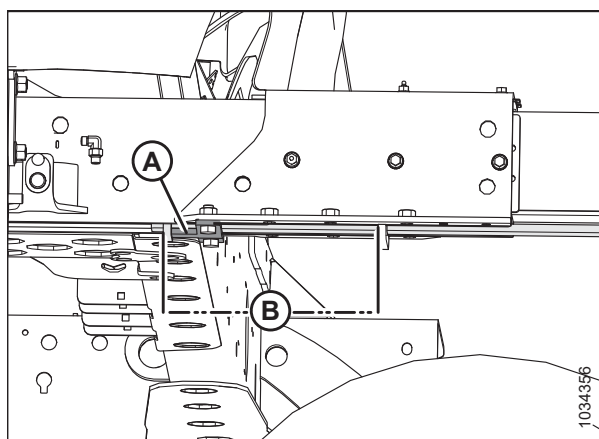


Figure 3.31: Narrow Transport Stop

## ASSEMBLING WINDROWER

26. Retrieve adjuster plugs (A) with preinstalled wear pads from the cab. Thread the adjuster plugs into the walking beam until the wear pads are tight against caster wheel extension (B).
27. Tighten and torque the adjuster plugs to 340 Nm (250 lbf-ft).
28. Back off the adjuster plugs by 1/4 of a turn and align the slot in the adjuster plugs with the anti-rotation holes. Secure with bolts (C) and nuts (D) as shown.

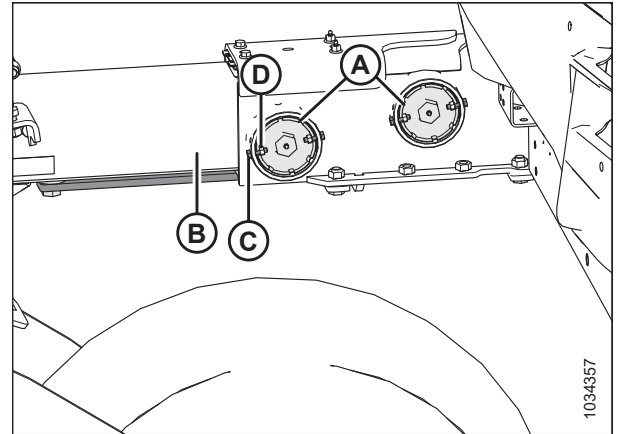


Figure 3.32: Walking Beam Adjuster Plugs

29. Install cylinder (A) as follows:
  - a. At the barrel end, secure the cylinder using pin strap (B), bolt and nut (C), and cylinder pin (D) retained in Step 11, page 50.
  - b. At the rod end, secure with clevis pin (E) and cotter pin (F) that is preinstalled on the caster wheel extension.
30. Move stop bracket (G) back to storage position.

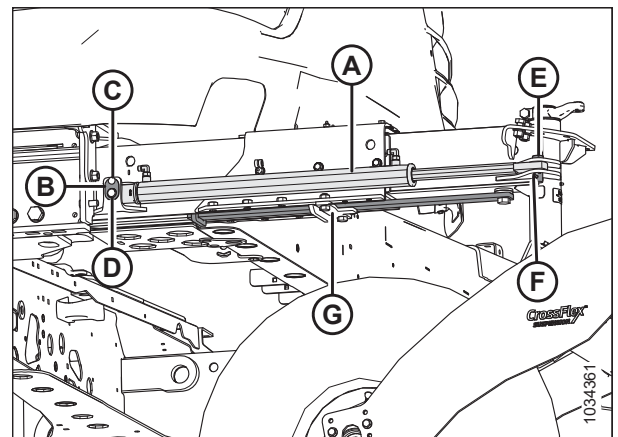


Figure 3.33: Cylinder Installed

### ***Installing left caster wheel***

31. Use a suitable lifting device to support the left caster wheel (A), and remove angle brace (B).

#### **NOTE:**

Ensure the wheel is supported; the wheel may shift when the brace is removed.

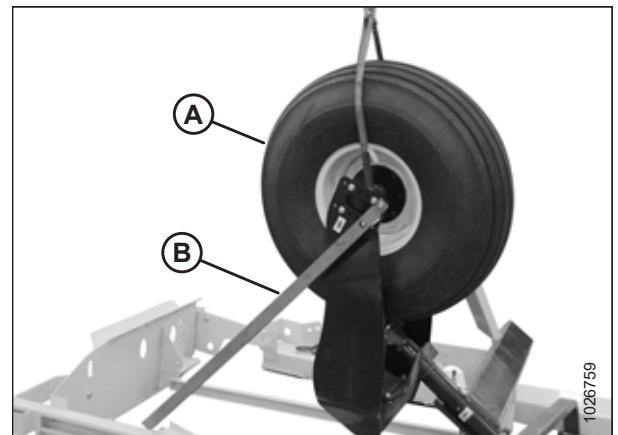


Figure 3.34: Caster Wheels Shipping Assembly

## ASSEMBLING WINDROWER

32. Remove four bolts (A) securing left caster wheel extension (B) to the shipping stand.
33. Lift the left caster wheel away from the shipping assembly and set it down on a smooth surface.

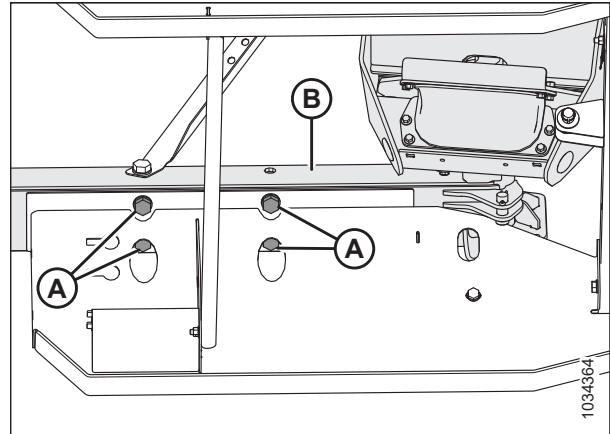


Figure 3.35: Caster Wheels Shipping Assembly – View from Under the Left Stand, Inboard

34. Repeat Step 18, page 51 to Step 30, page 53 to install the left caster wheel.

**NOTE:**

The left cylinder (A) has one fitting (B) different from the right cylinder.

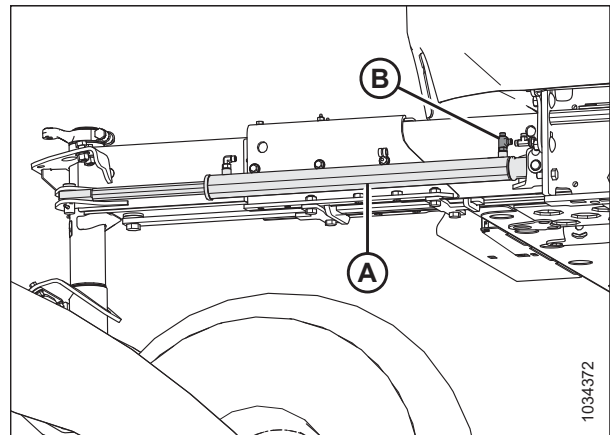


Figure 3.36: Left Cylinder with Tee Fitting

35. Ensure the left and right caster wheel widths are equal.

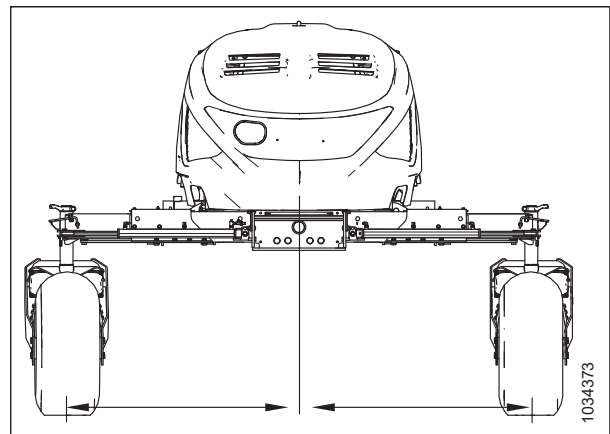


Figure 3.37: Walking Beam Adjustment



### 3.6 Installing Anti-Shimmy Dampeners

The anti-shimmy dampeners stabilize the caster wheels.

1. Remove and retain retaining ring (A).
2. Remove and discard yellow spacer (B).

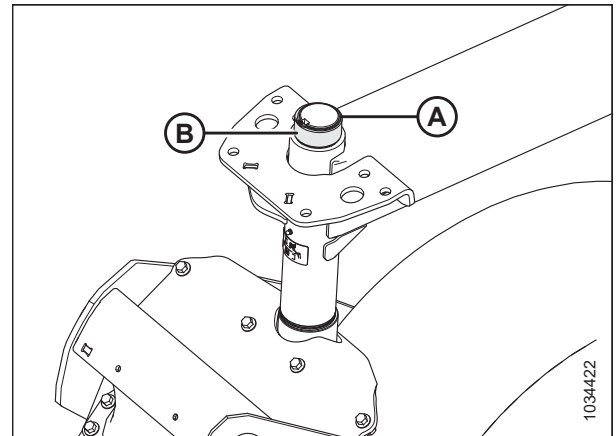


Figure 3.38: Caster Wheel – Left Cab-Forward

3. Retrieve the anti-shimmy dampener shocks, caster arms, and hardware from the toolbox in the left platform.

**NOTE:**

Use the ignition key to unlock the toolbox.

4. Install flat washer (A) and key (B) onto the caster shaft.

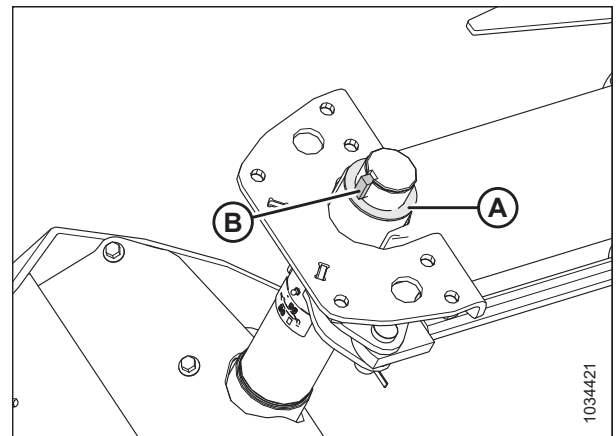


Figure 3.39: Caster Wheel Extension – Left Cab-Forward

5. Install caster arm (A) onto the caster shaft, and secure it with an M16 X 85 bolt (B) and nut (C).
6. Install retaining ring (D).
7. Tighten nut (C) and torque to 190–200 Nm (140–147 lbf·ft).

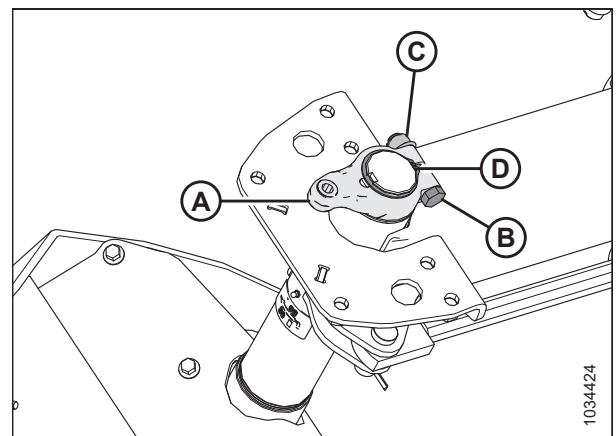


Figure 3.40: Caster Arm – Left Cab-Forward

## ASSEMBLING WINDROWER

8. Retrieve left shimmy shock mount (A).
9. Remove and retain bolts and nuts (B), and reflector bracket (C) from shimmy shock mount (A).

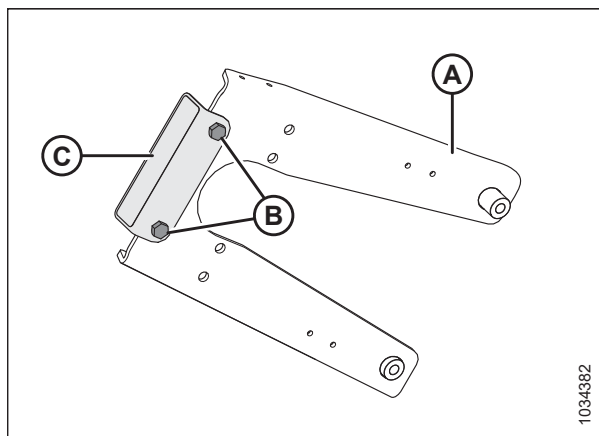


Figure 3.41: Left Shimmy Shock Mount

10. Position shimmy shock mount (A) on the left caster wheel extension and secure it with four bolts and nuts (B) retained in Step 6, page 49.
11. Install reflector bracket (C) using two bolts (D) and a nut on the shimmy shock mount (A) and shimmy base support.

**NOTE:**

The outboard edge of the dampener bracket should be as flush as possible with the shimmy base support on the extension to keep the dampeners aligned.

12. Tighten the nuts on bolts (B) and (D) to 170 Nm (125 lbf-ft).

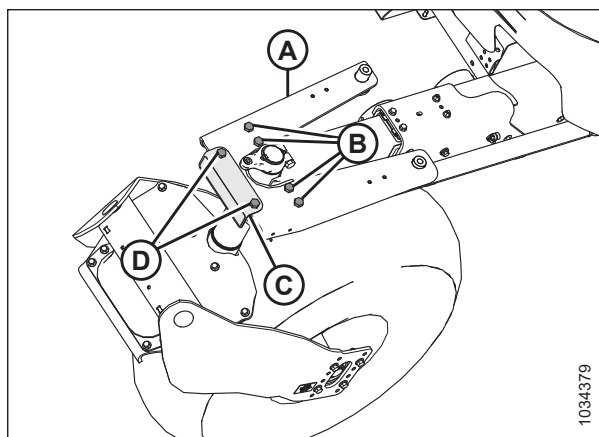


Figure 3.42: Shimmy Shock Mount – Left Cab-Forward

13. Attach the barrel end of anti-shimmy dampener (A) to the forward spacer hole location (B) in the shimmy shock mount with one M16 x 150 flange head bolt (C) and one M16 tech lock nut (D). Do **NOT** fully tighten.

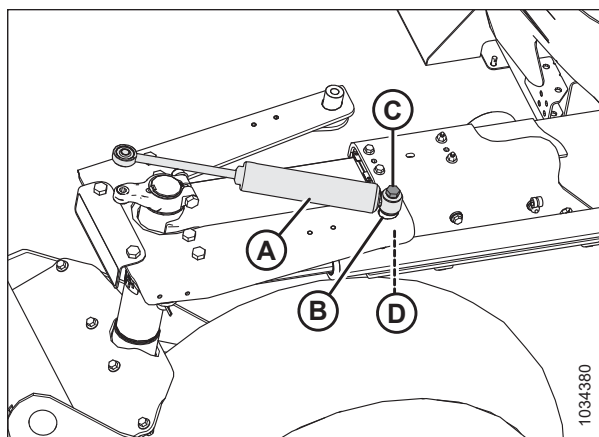


Figure 3.43: Shimmy Shock Dampener – Left Cab-Forward

## ASSEMBLING WINDROWER

14. Attach the barrel end of second anti-shimmy dampener (A) to the aft spacer hole location (B) in the shimmy shock mount with one M16 x 150 flange head bolt (C) and one M16 tech lock nut (D). Do **NOT** fully tighten.
15. Rotate the caster arm so that arm (E) is aligned with the walking beam.

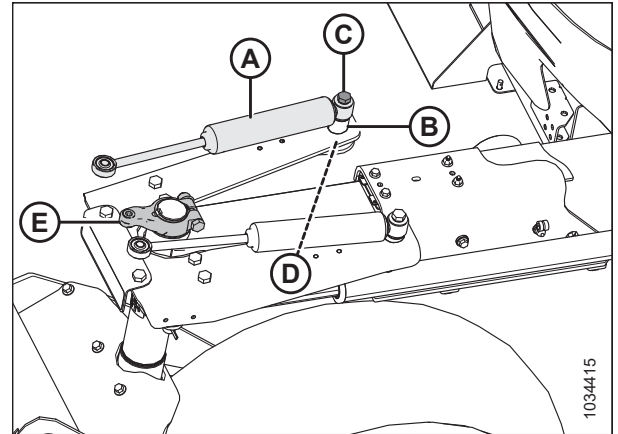


Figure 3.44: Shimmy Shock Dampener – Left Cab-Forward

16. Attach the rod ends of anti-shimmy dampeners (A) to arm (B) with M16 x 90 flange head bolt (C) and three hardened washers (D).

**NOTE:**

Washers (D) are stamped with L9 for identification.

17. Torque bolt (C) to 244 Nm (180 lbf-ft).
18. Install jam nut (E) and torque to 136–140 Nm (100–103 lbf-ft).
19. Tighten bolts (F) at barrel end of anti-shimmy dampeners, and torque to 136–140 Nm (100–103 lbf-ft).

**IMPORTANT:**

Keep the arm parallel to the walking beam while tightening. Do **NOT** overtighten.

20. Repeat Step 1, page 55 to Step 19, page 57 at the opposite end of walking beam.

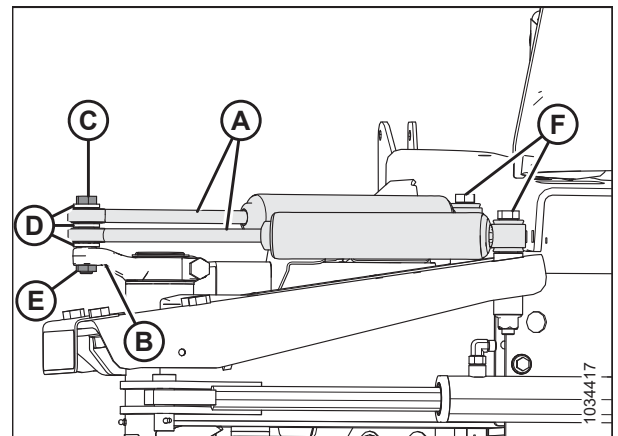


Figure 3.45: Anti-Shimmy System – Left Cab-Forward

## 3.7 Connecting Wheel Leg Hydraulics and Electrical System

Reconnect the wheel leg hydraulic and electrical connections that were disconnected for shipping purposes.

### NOTE:

A bag containing 14 medium cable ties (MD #21763) and 1 large cable tie (MD #30753) is shipped inside the windrower cab. This procedure requires medium cable ties.

### *Junction manifold hydraulic connections*

1. Connect hoses from the left wheel leg to the junction manifold as follows:
  - a. Connect the 3/8 in. internal diameter (ID) lift hose (A) with no cable tie to port HL.
  - b. Connect the 1/4 in. ID float hose (B) marked with a yellow cable tie to port FL.
  - c. Connect the 3/8 in. ID lift hose (C) marked with a yellow cable tie to port CL.
  - d. Connect the 1/2 in. ID case drain hose (D) marked with a red cable tie to port MDL.

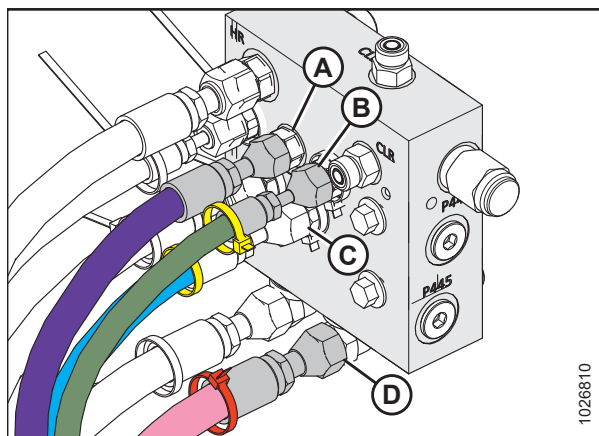


Figure 3.46: Junction Manifold Left Leg Hoses

2. Connect hoses from the right wheel leg to the junction manifold as follows:
  - a. Connect the 1/2 in. internal diameter (ID) lift hose (A) with no cable tie to port HR.
  - b. Connect the 1/4 in. ID float hose (B) marked with a black cable tie to port FR.
  - c. Connect the 3/8 in. ID lift hose (C) marked with a black cable tie to port CR.
  - d. Connect the 1/2 in. ID case drain hose (D) marked with a blue cable tie to port MDR.

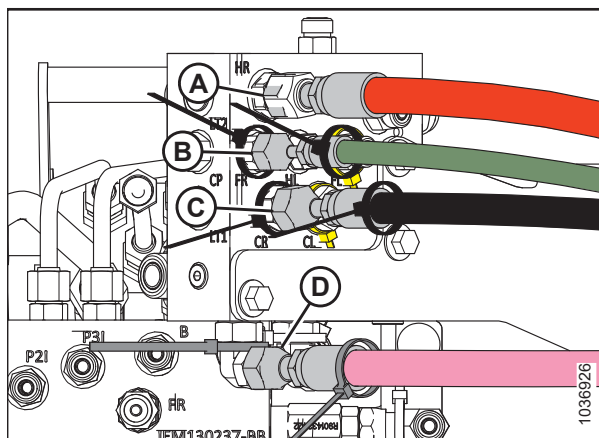


Figure 3.47: Junction Manifold Right Leg Hoses

## Float selector manifold hydraulic connections

3. Connect hoses from the right wheel leg to the float selector manifold as follows:
  - a. Connect the 1/4 in. ID brake hose (A) with no cable tie to port BR.
  - b. Connect the 1/4 in. ID float hose (B) with no cable tie to port FR with extension.
4. Connect hoses from the left wheel leg to the float selector manifold as follows:
  - a. Connect the 1/4 in. ID brake hose (C) marked with a black cable tie to port BL.
  - b. Connect the 1/4 in. ID float hose (D) marked with a black cable tie to port FL with extension.
5. Use provided cable tie (A) to secure two hoses (B) (routed from the right leg to the float selector manifold) to the case drain hose marked with a blue cable tie.
6. Use provided cable tie (C) to secure two hoses (D) (routed from the left leg to the float selector manifold) to the case drain hose marked with a red cable tie.

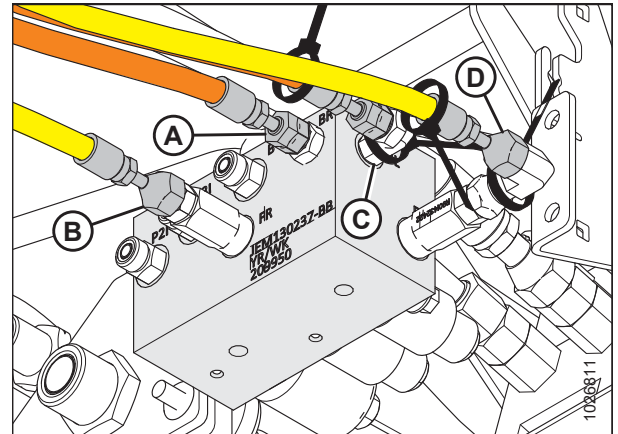


Figure 3.48: Float Selector Manifold

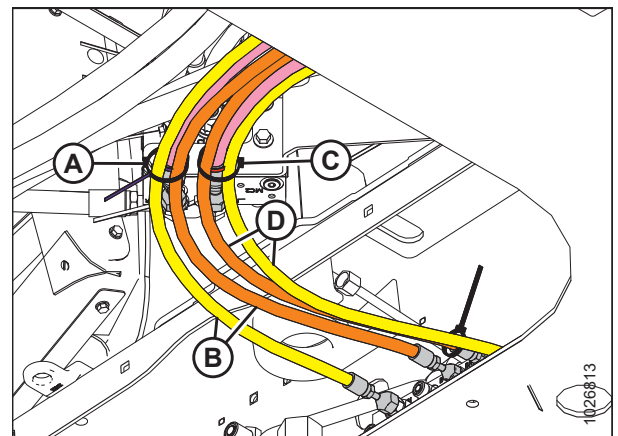


Figure 3.49: Securing Hoses

## Traction drive pump hydraulic connections

7. Route the traction drive hoses through the supports inside the cross member and secure with cable ties (A).

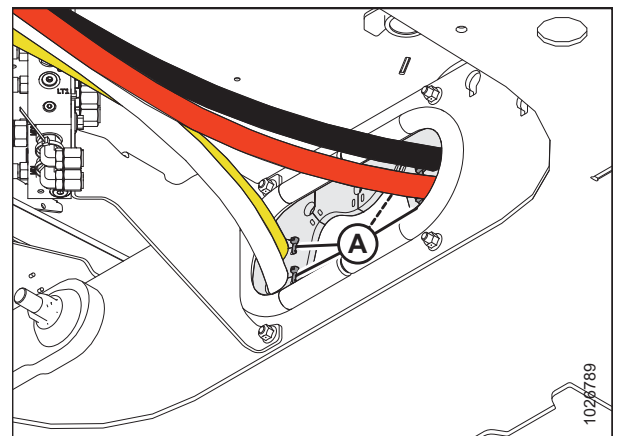


Figure 3.50: Hose Support at Cross Member

## ASSEMBLING WINDROWER

8. Remove nuts and bolts (A), and remove routing clamp (B) from hose support (C) in front of the pump stack.
9. Route the traction drive hoses through the hose support, position them so that they do **NOT** sag below the windrower frame, and then reinstall the routing clamp.

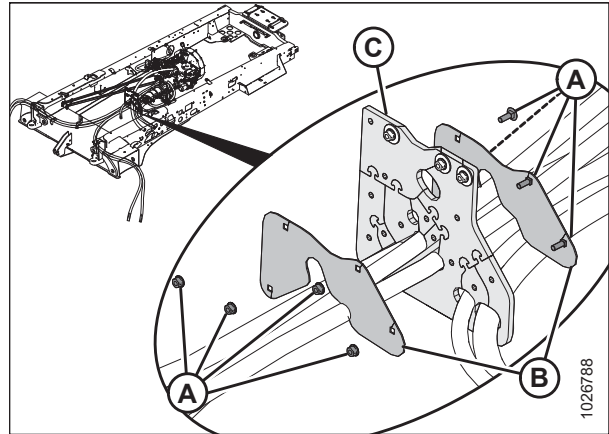


Figure 3.51: Hose Support at Pump Stack

10. Connect the hoses from the wheel drive motors to the traction drive pump as follows:
  - a. Connect the hose from port B on the right wheel motor to port (A) (the one with extended adapter and marked with a black cable tie).
  - b. Connect the hose from port A on the right wheel motor to port (B) (the one with extended adapter and marked with a red cable tie).
  - c. Connect the hose from port B on the left wheel motor to port (C) (the one marked with a yellow cable tie).
  - d. Connect the hose from port A on the left wheel motor to port (D) (the one with no cable tie).

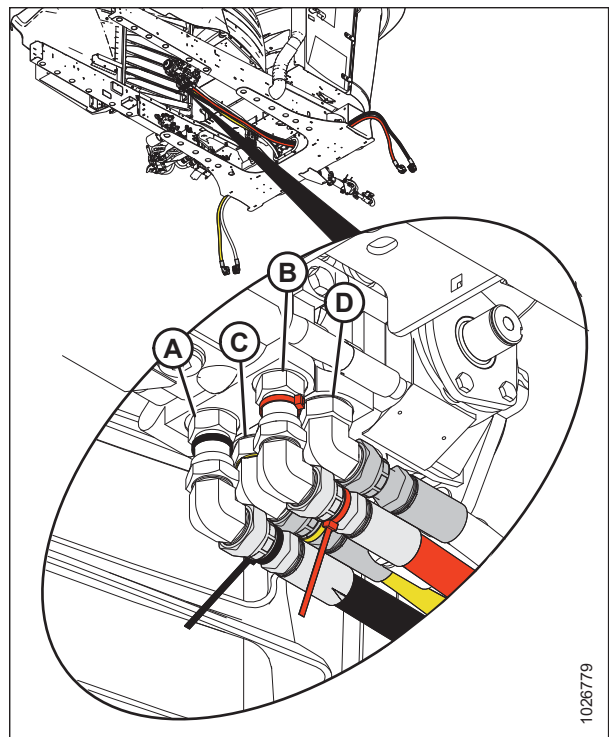


Figure 3.52: Traction Drive Pump

## Electrical Connections

11. Route harness (A) from each wheel motor through the hose support behind the front cross member, and connect it to master controller harness (B) as follows:

- Connect the right wheel motor connector C25B to master controller connector C25A.
- Connect the left wheel motor connector C26B to master controller connector C26A.
- Secure the harness in the hose support with cable ties (C).

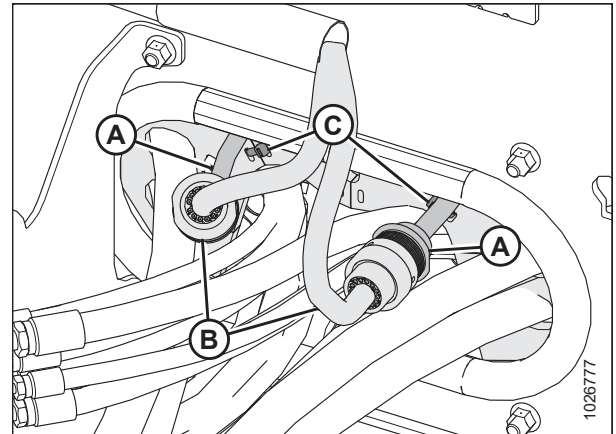


Figure 3.53: Electrical Connections

12. Connect the front end sliding leg hoses from the cylinders to the valve block as follows:
  - a. Route right base end hose (A) from the frame opening to the right side of tee (E). Route on the right side of pressure relief block (G).
  - b. Route right rod end hose (B) from the frame opening to the right side of tee (F). Route on the left of pressure relief block (G).
  - c. Route the left base end hose (C) from the frame opening to the left side of tee (E). Route on the left of pressure relief block (G).
  - d. Route left rod end hose (D) from the frame opening to the left side of tee (F). Route on the side of pressure relief block (G).

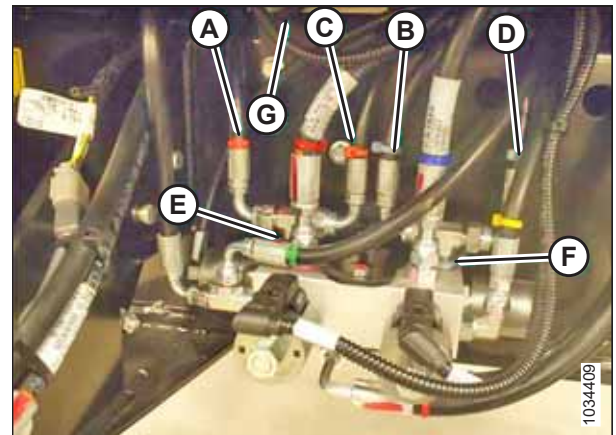
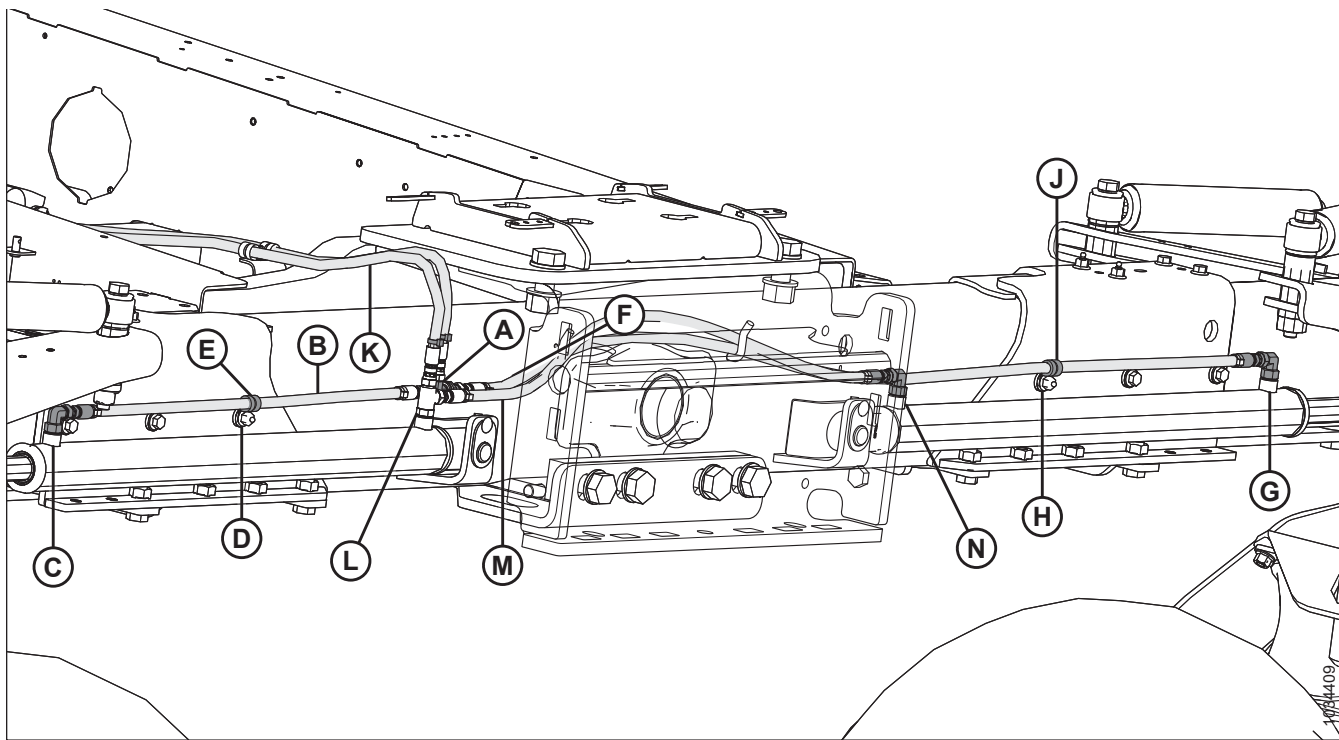


Figure 3.54: Front Sliding Hydraulics Connection



## ASSEMBLING WINDROWER



**Figure 3.55: Rear Sliding Hydraulics Connection**

**NOTE:**

The walking beam pivot bracket is transparent in the illustration above to show the barrel end of the right cylinder.

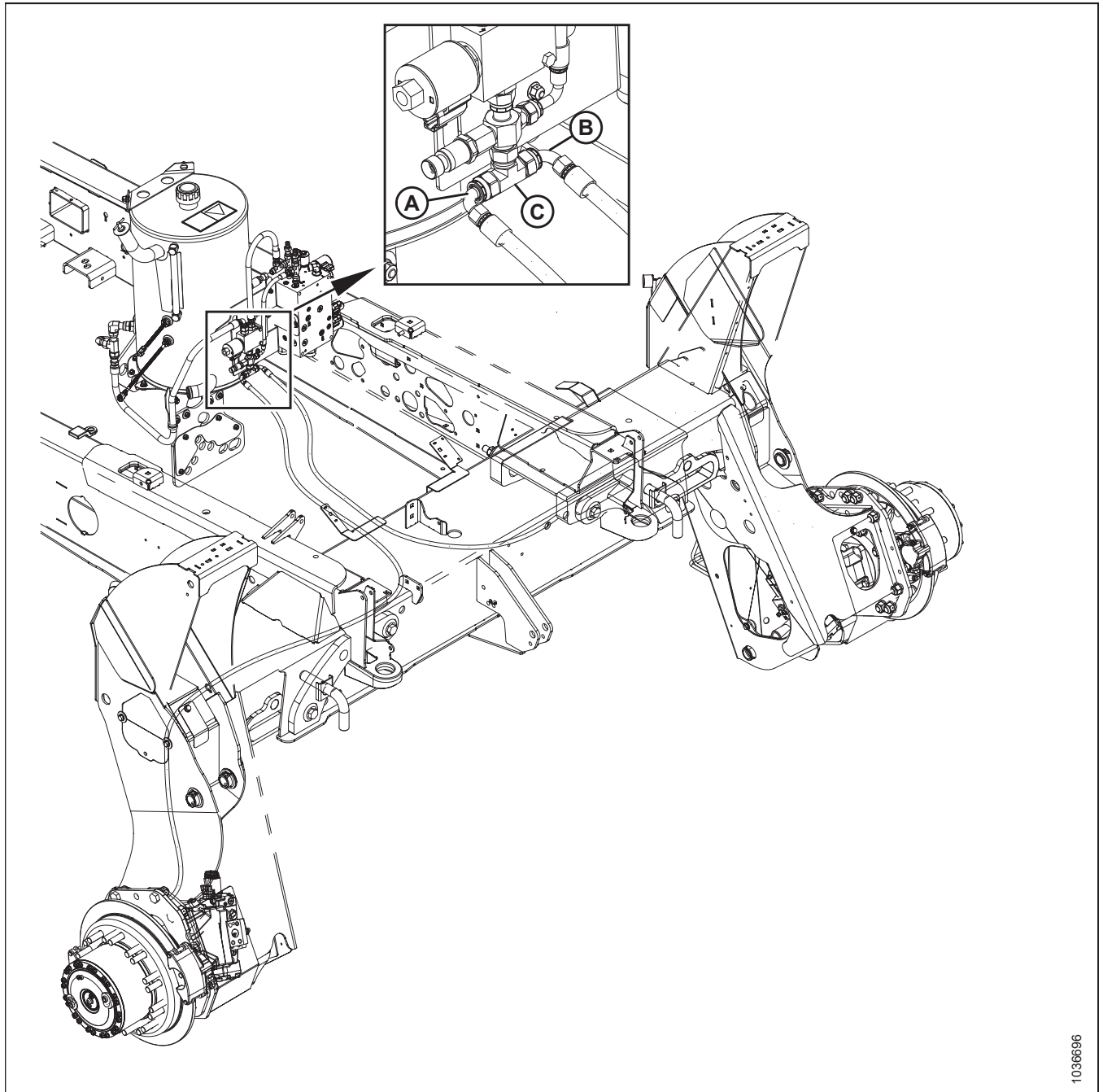
13. Connect the rear end sliding leg hoses from the valve block to the hydraulic cylinders as follows:

- a. Connect the hose from port P8 on the valve block marked with yellow cable tie to the top of tee (A) attached to the walking beam.
- b. Connect loose hose (B) from the left of tee (A) to the rod end of left cylinder (C).
- c. Remove bolt (D) and attach p-clip (E). Reinstall the bolt, and torque to 40 Nm (32 lbf·ft).
- d. Connect hose (F) from right of tee fitting (A) to the rod end of right cylinder (G).
- e. Remove bolt (H) and attach p-clip (J). Reinstall the bolt, and torque to 40 Nm (32 lbf·ft).
- f. Connect hose (K) from port P7 on the valve block marked with green cable tie to top of tee (L).
- g. Connect short hose (M) draped across the walking beam pivot at tee (L) to barrel end (N) of the right cylinder.



### 3.8 Connecting Brake Hydraulics – Windrowers Sold In Germany Only

Reconnect the brake hydraulic connections that were disconnected for shipping purposes.



**Figure 3.56: Brake Hydraulic Connection**

1. Connect right (A) and left (B) brake hoses from drive wheel legs to tee fitting (C).

## 3.9 Installing Left Platform Assembly

Install the platform, railings, and steps on the left side of the windrower.

### *Installing left platform*

1. To avoid accidental damage, raise the windrower hood.
2. Install platform linkage (A) onto the frame with two existing bolts and nuts. Nuts (B) should face outward.

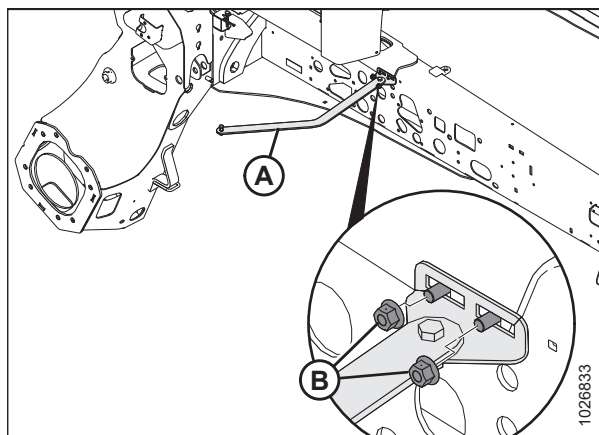


Figure 3.57: Platform Linkage

3. Remove three existing nuts and bolts (A) and adjuster bolt (B) from the left platform bracket. Retain hardware for installation.
4. Attach a suitable lifting device to lift brackets (C) and move the left platform next to the left side of the windrower.

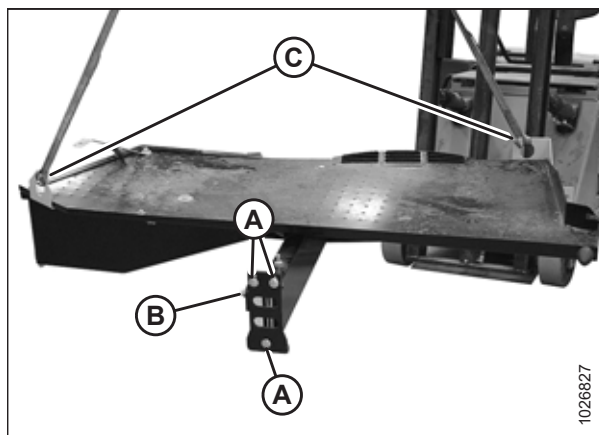


Figure 3.58: Left Platform

5. Align holes in platform bracket (A) with holes in the windrower frame, and secure bracket with three existing bolts (B) and nuts (C). Nuts should face outward.

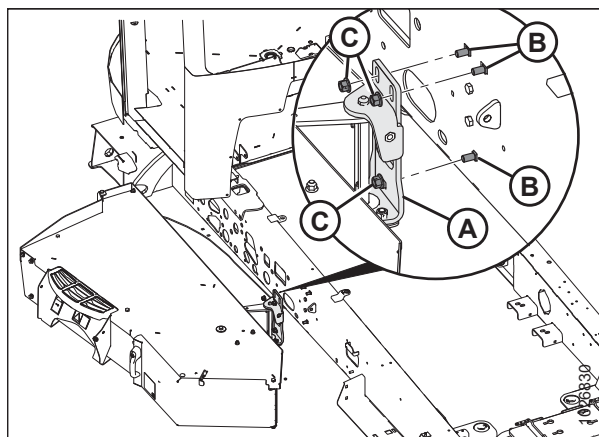
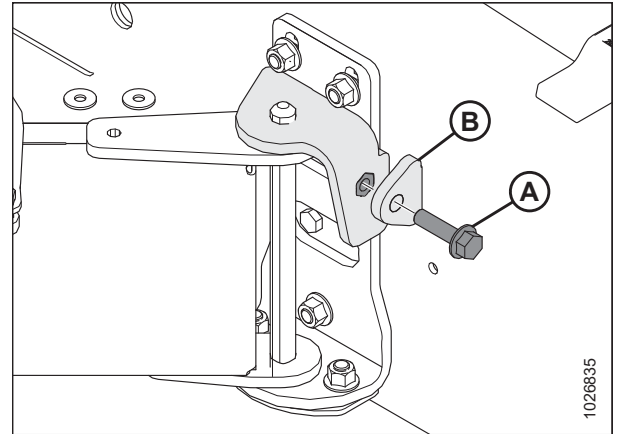


Figure 3.59: Left Platform Bracket

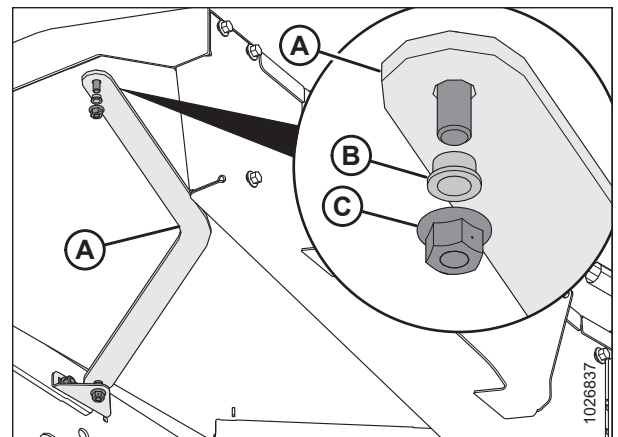
## ASSEMBLING WINDROWER

6. Reinstall platform adjuster bolt (A) through gusset (B) on the left frame member.



**Figure 3.60: Left Platform Bracket**

7. Use the existing hardware to connect platform linkage (A) to hole in the platform. Ensure bushing (B) remains in the linkage hole; nut (C) is installed below the platform. Torque nut to 14.5 Nm (11 lbf·ft).



**Figure 3.61: Linkage Below Platform**

## ASSEMBLING WINDROWER

8. Adjust the platform angle using bolt (A) until platform just touches front support (B) when closing.
9. After adjustment is complete, torque three platform bracket bolts (C) to 68.5 Nm (50.5 lbf·ft), and two linkage bolts (D) to 39.5 Nm (29 lbf·ft).

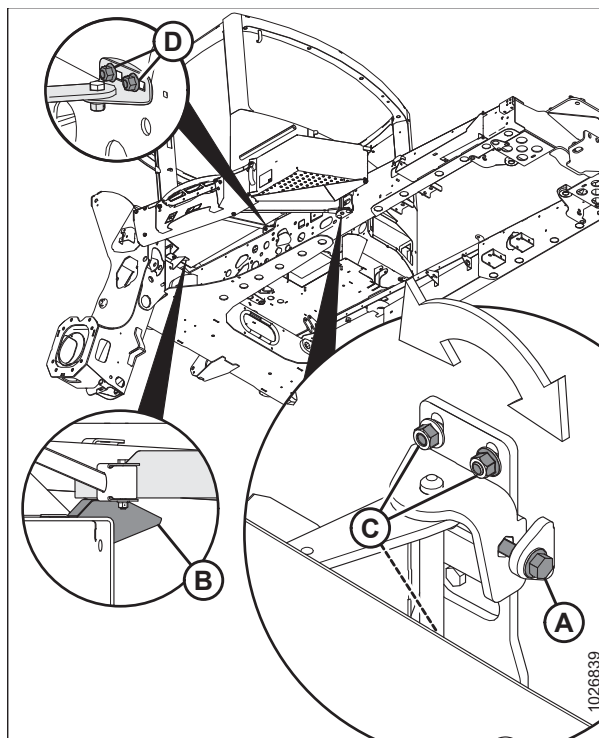


Figure 3.62: Left Platform Angle Adjust

### *Installing left platform handrails*

10. Remove shipping strap (A) and retain the hardware.
11. Remove rear lifting bracket (B) and discard the hardware.
12. Ensure toolbox door (C) is locked, and remove long hinge bolt and nut (D). Retain the hardware.
13. Remove and retain two bolts (E) next to the toolbox.
14. Remove forward lifting bracket (F) and retain three bolts (G).

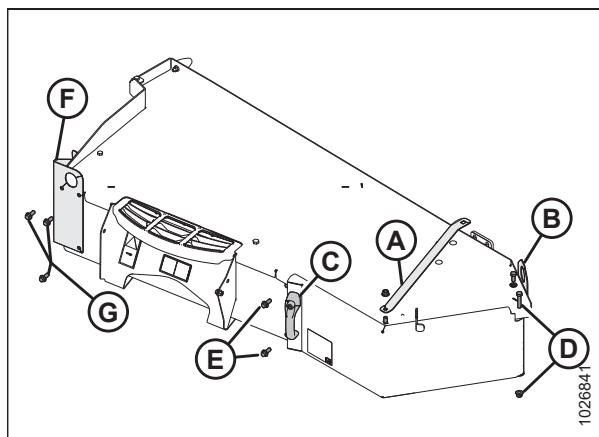


Figure 3.63: Left Platform Assembly

## ASSEMBLING WINDROWER

15. Set rear handrail (A) on platform and secure it as follows:
  - a. Install existing long hinge bolt (B) with nut.
  - b. Install two bolts (C) into the side platform. Torque bolts to 95 Nm (70 lbf-ft).
  - c. Open toolbox tray (D) and install existing bolt and nut (E) with the bolt head on top of the platform.
16. Set front handrail (F) on platform and secure it with three existing bolts (G). Torque bolts to 95 Nm (70 lbf-ft).

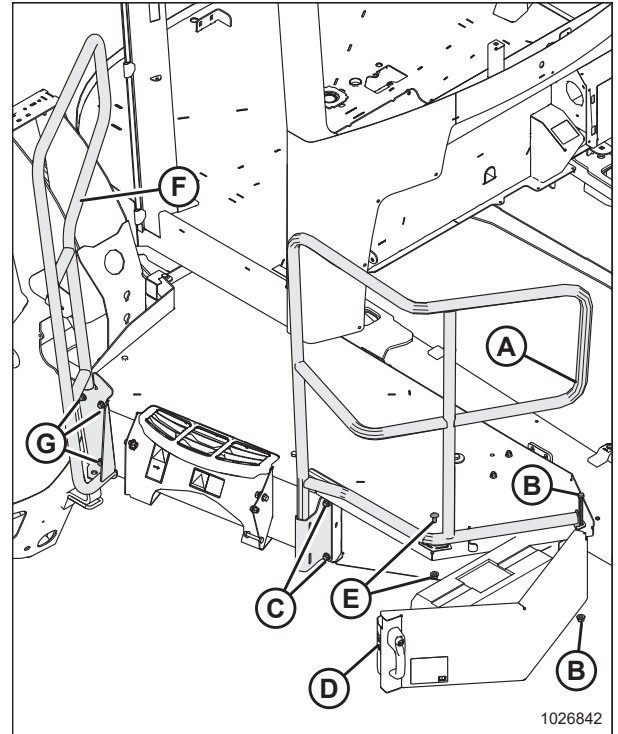


Figure 3.64: Installing Handrails

### *Installing left platform steps*

17. Remove two nuts (A), lock clips (B), and bolts (C) from the steps.

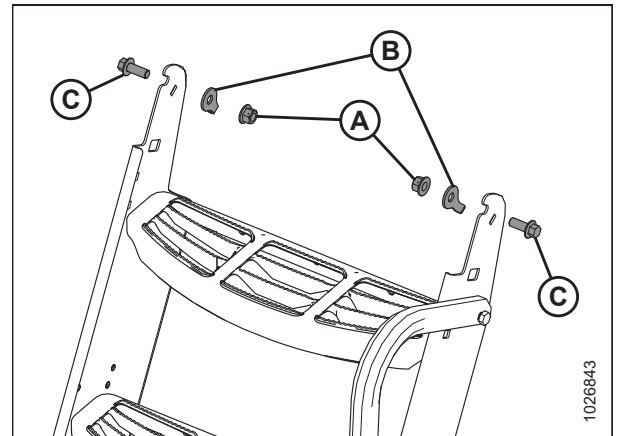


Figure 3.65: Left Platform Steps

## ASSEMBLING WINDROWER

18. Insert two bolts (A) into platform and hook steps (B) onto the bolts.
19. Install lock clips (C) with tabs in the slots and secure with nuts (D). Torque bolts to 95 Nm (70 lbf·ft).

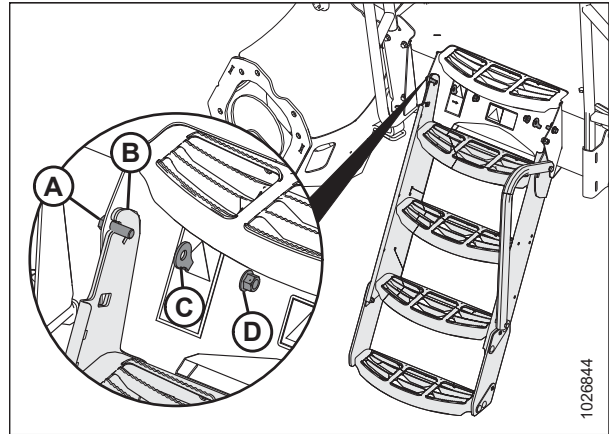


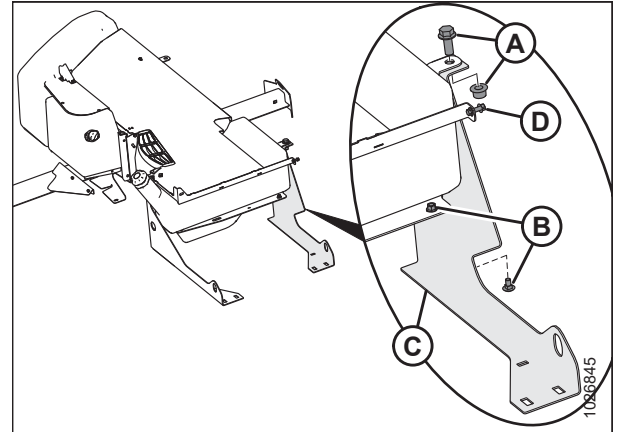
Figure 3.66: Left Platform Steps

### 3.10 Installing Right Platform / Fuel Tank Assembly

Install the platform/fuel tank, railings, and steps on the right side of the windrower.

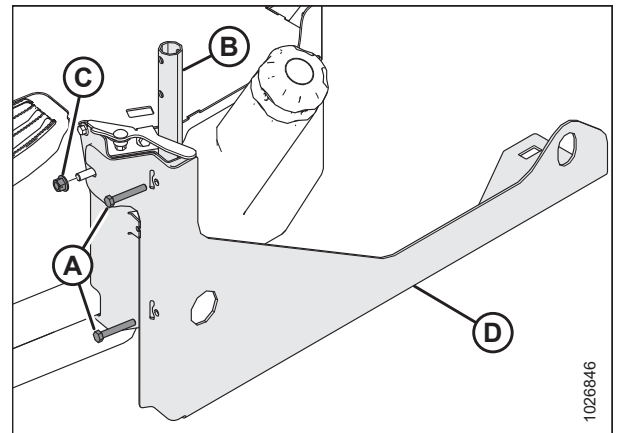
#### *Installing right platform*

1. To avoid accidental damage, raise the windrower hood.
2. Set the right platform on a stand to allow access to the hardware below.
3. Remove two nuts and bolts (A) and (B) to remove shipping bracket (C).
  - Retain bolt (A) for installation, but discard the nut.
  - Retain bolt and nut (B) for installation.
4. Remove bolt and nut (D), and retain for installation.



**Figure 3.67: Right Platform Shipping Brackets**

5. Remove two nuts and bolts (A), and remove shipping spacer tube (B) from the handrail channel.
6. Remove nuts (C) from the stud next to steps, remove shipping bracket (D), and reinstall nut (C) onto stud for installation.



**Figure 3.68: Right Platform Shipping Brackets**

## ASSEMBLING WINDROWER

7. From below the right platform assembly, remove and discard three bolts and nuts (A) and (B), and remove the horizontal shipping channel.
8. Remove bolt and nut (C), and retain for installation.

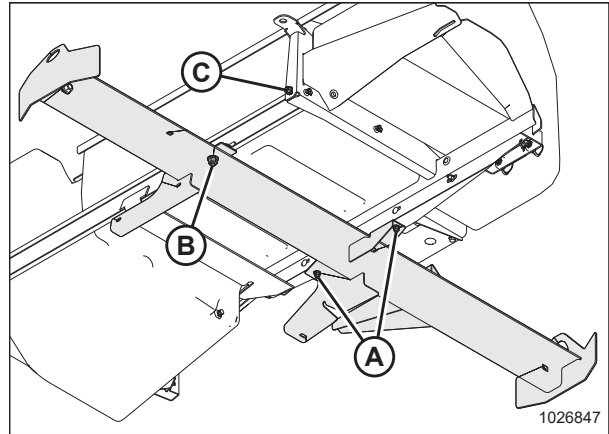


Figure 3.69: Right Platform Shipping Brackets

9. On the right chassis frame member, remove two bolts (A) and remove hose cover (B).

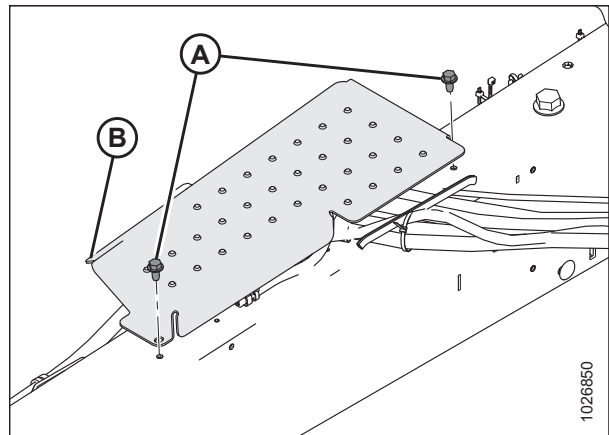


Figure 3.70: DEF Hose Cover

10. Loosen two bolts (A) securing the hose brackets and move the hoses away from platform mounting bolt (B).
11. Remove platform mounting bolt (B) and retain for installation.

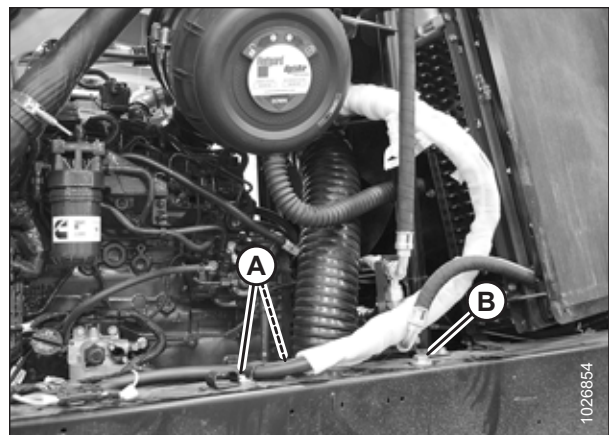


Figure 3.71: Hose Clamps on Right Frame



## ASSEMBLING WINDROWER

12. To improve access to the right platform mounting bolts, position a bottle jack (A) and a block of wood near right front cab shock (B) and lift the cab until you feel resistance.

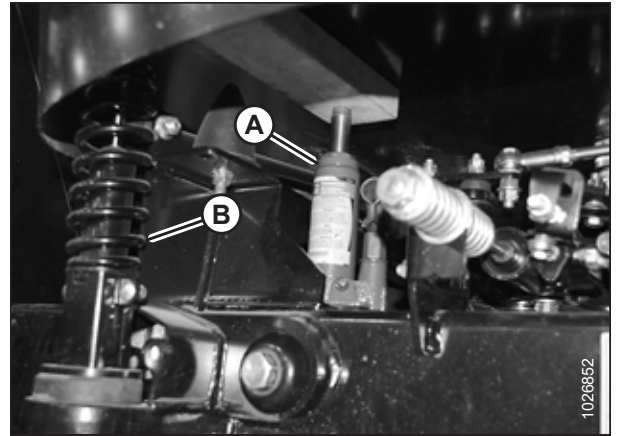


Figure 3.72: Bottle Jack Lifting Cab

13. Support right platform assembly (A) with a suitable lifting device, adjust lifting straps (B) until the platform is parallel to the ground, and move it into place on the right side of windrower. Move hose bundle (C) to prevent pinching.

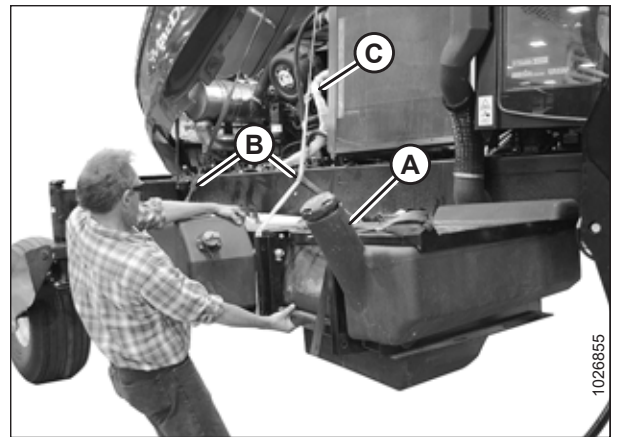
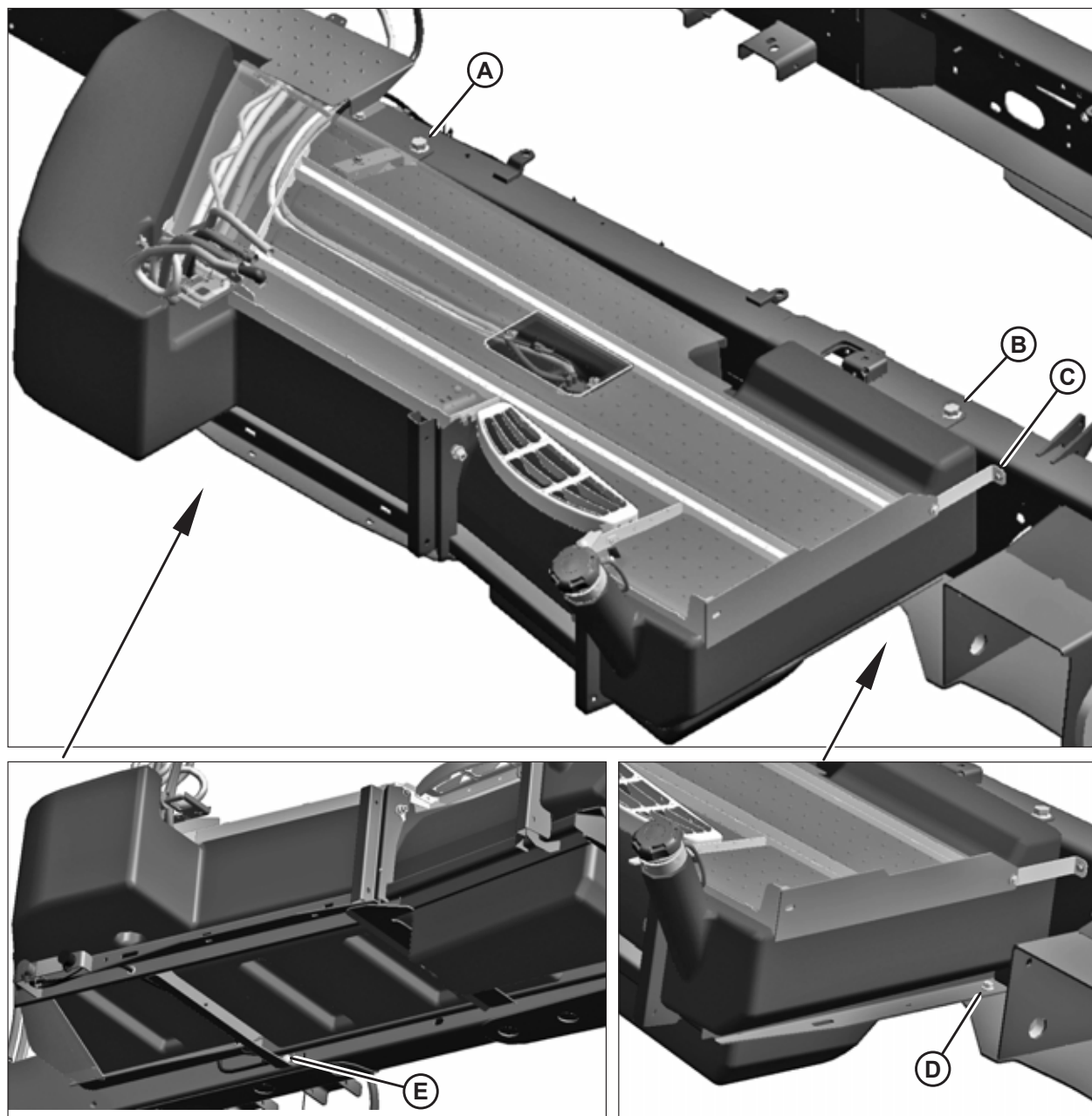


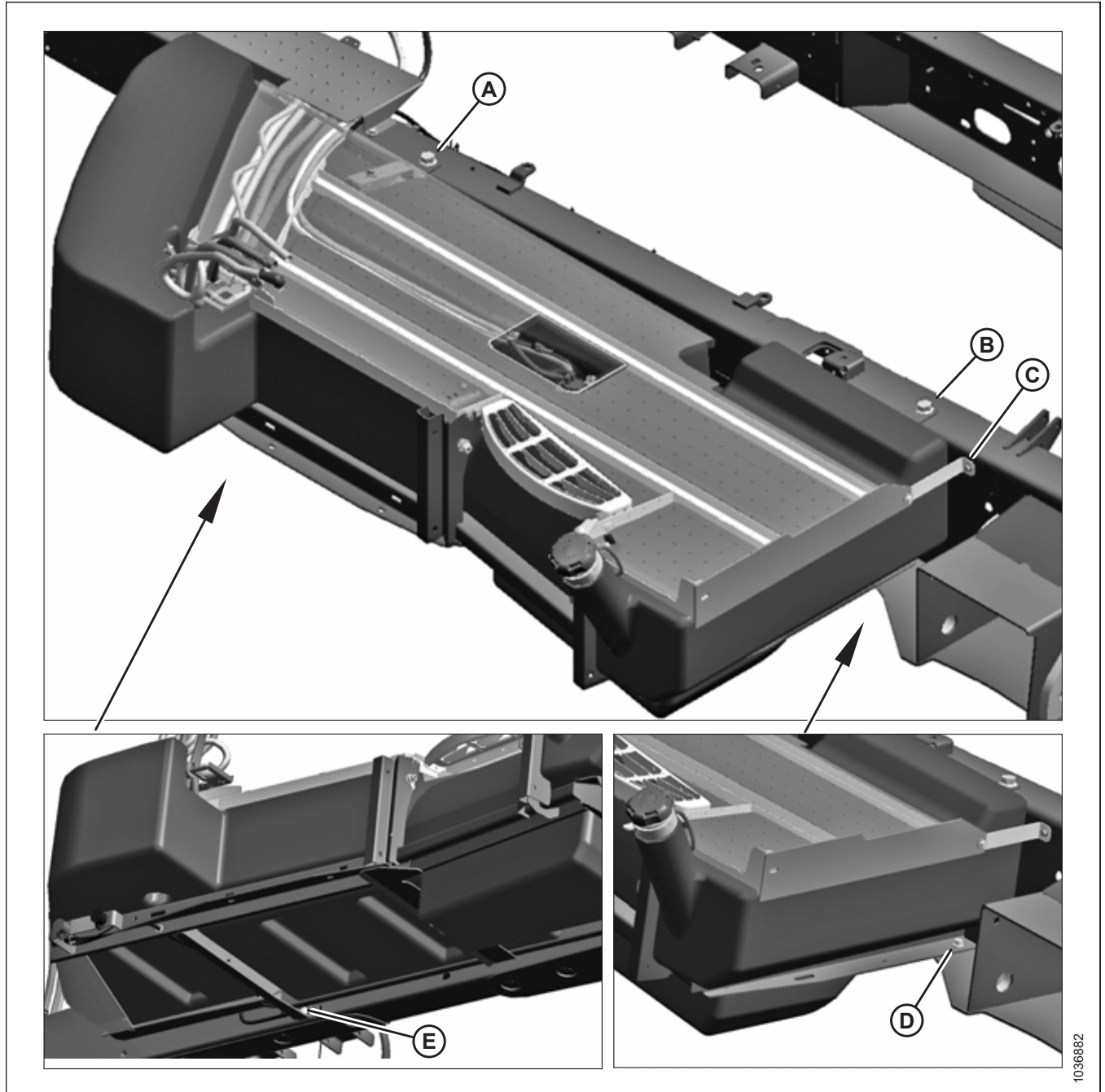
Figure 3.73: Right Platform/Fuel Tank Assembly



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**Figure 3.74: Attaching Right Platform Assembly**

14. Secure the rear platform support to frame with bolt (A) retained from the frame.
15. Secure the front platform support to the frame with bolt (B) retained from the shipping configuration.
16. With the bolt head outside the frame, install existing nut and bolt (C) through the side of the frame member at the front of the platform.
17. With the bolt head below the frame, secure front of the platform to lower the frame with nut and bolt (D) retained from the shipping configuration.
18. With the bolt head outside the frame, install existing nut and bolt (E) through the side of the frame member at rear of the platform.



**Figure 3.75: Attaching Right Platform Assembly**

19. For the right platform bolt torque values, refer to Table 3.1, page 73.

**Table 3.1 Right Platform Bolt Torque**

Bolt Location (Callout)	Torque Value
Rear support, top frame (A)	500 Nm (379 lbf·ft)
Front support, top frame (B)	500 Nm (379 lbf·ft)
Front side frame (C)	54 Nm (40 lbf·ft)
Front lower frame (D)	68.5 Nm (50 lbf·ft)
Rear side frame (E)	68.5 Nm (50 lbf·ft)

## Installing right platform steps

20. Remove all the hardware shipped on the steps mounting-studs and install the hardware and steps in the following order:

### NOTE:

Left stud on the steps shown; repeat installation order for the right stud.

- a. Install flat washer (A) on the studs.
  - b. Hang steps (B) on the studs.
  - c. Install lock clips (C) with the tab in the slot.
  - d. Install conical washers (D).
  - e. Install flat washer (E).
  - f. Install nut (F). Torque nut to 40 Nm (29.5 lbf·ft) and then back off 1/4 turn.
21. Remove the shipping wire from shock (A) (lowered position shown transparent in illustration at right).
  22. Rotate the steps up. Ensure latch (B) engages to lock the steps in place.
  23. Rotate shock (A) up and connect to the steps with the existing hardware.

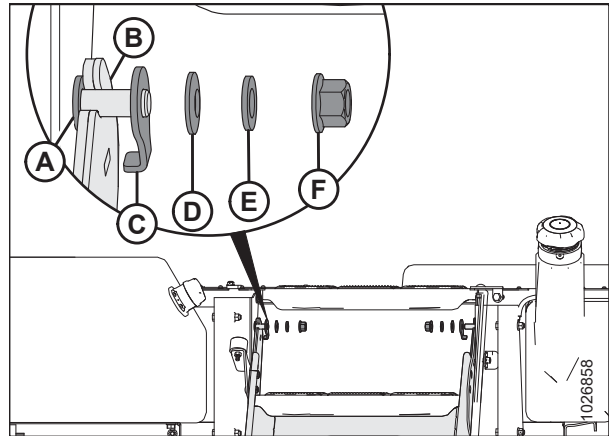


Figure 3.76: Platform Steps Hardware

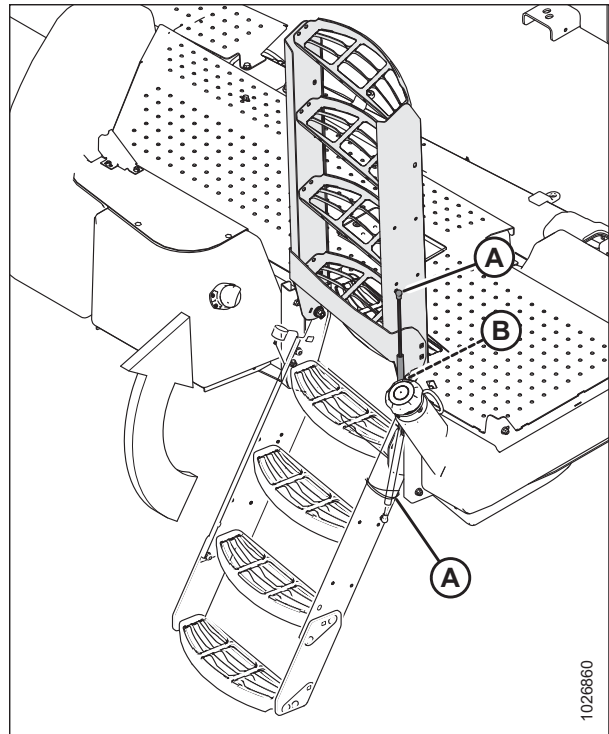
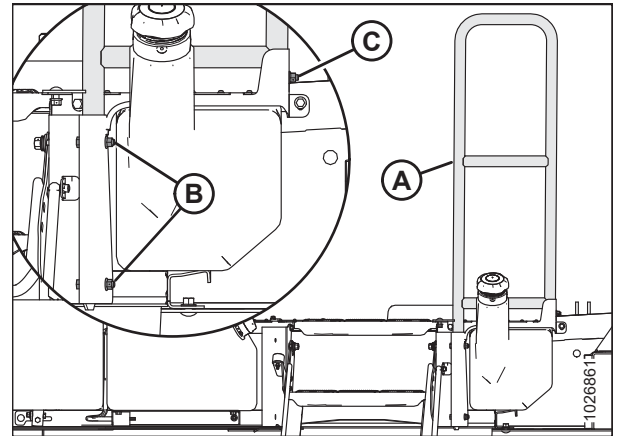


Figure 3.77: Platform Steps

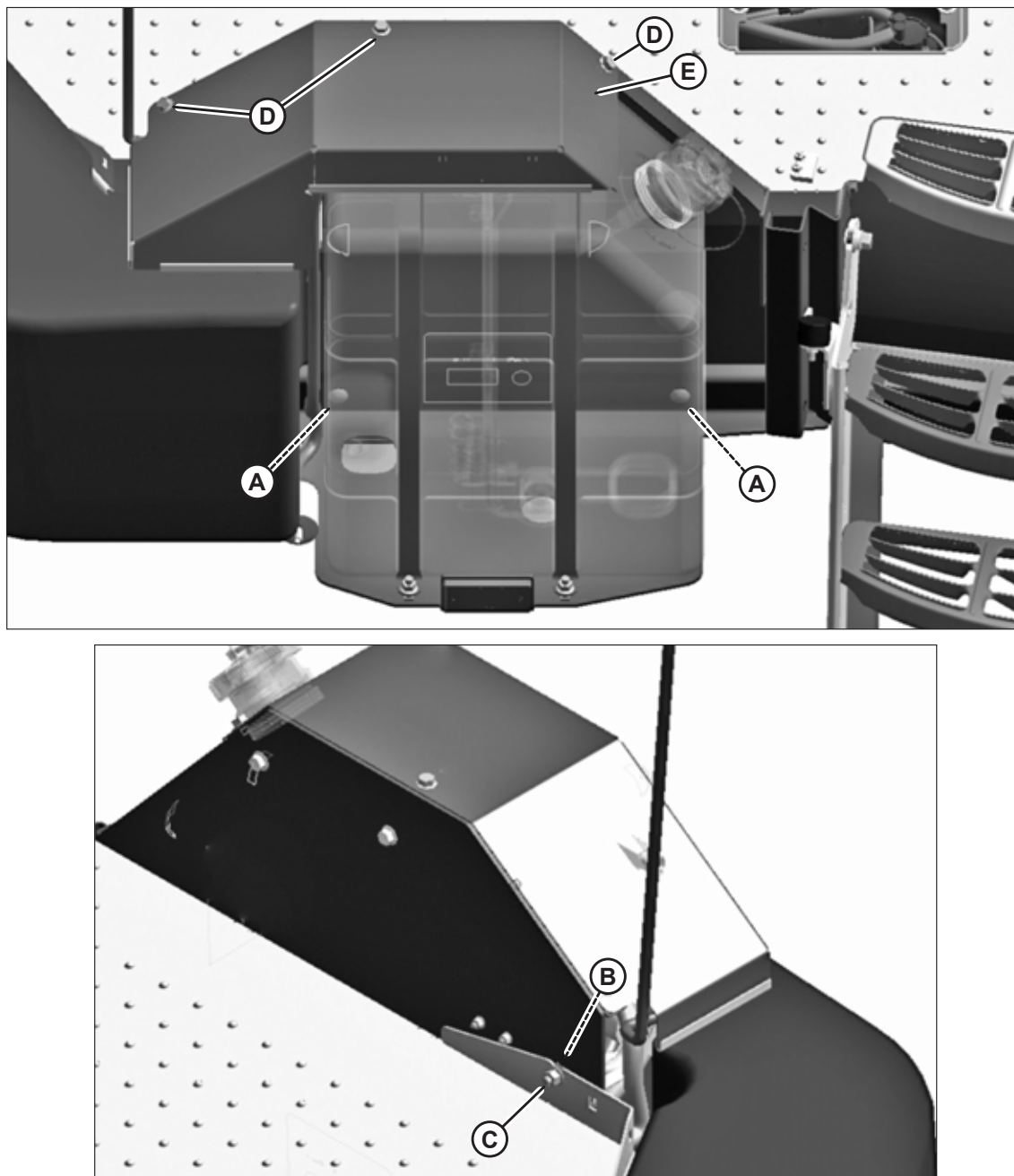
## ASSEMBLING WINDROWER

### *Installing right platform handrails*

24. Retrieve forward handrail (A). Remove and retain existing hardware (three bolts and nuts).
25. Insert the handrail tube into the channel to the right of the steps, and secure with existing hardware (B) and (C).
26. Torque the hardware to 35 Nm (26 lbf·ft).



**Figure 3.78: Front Handrail – Right Platform**



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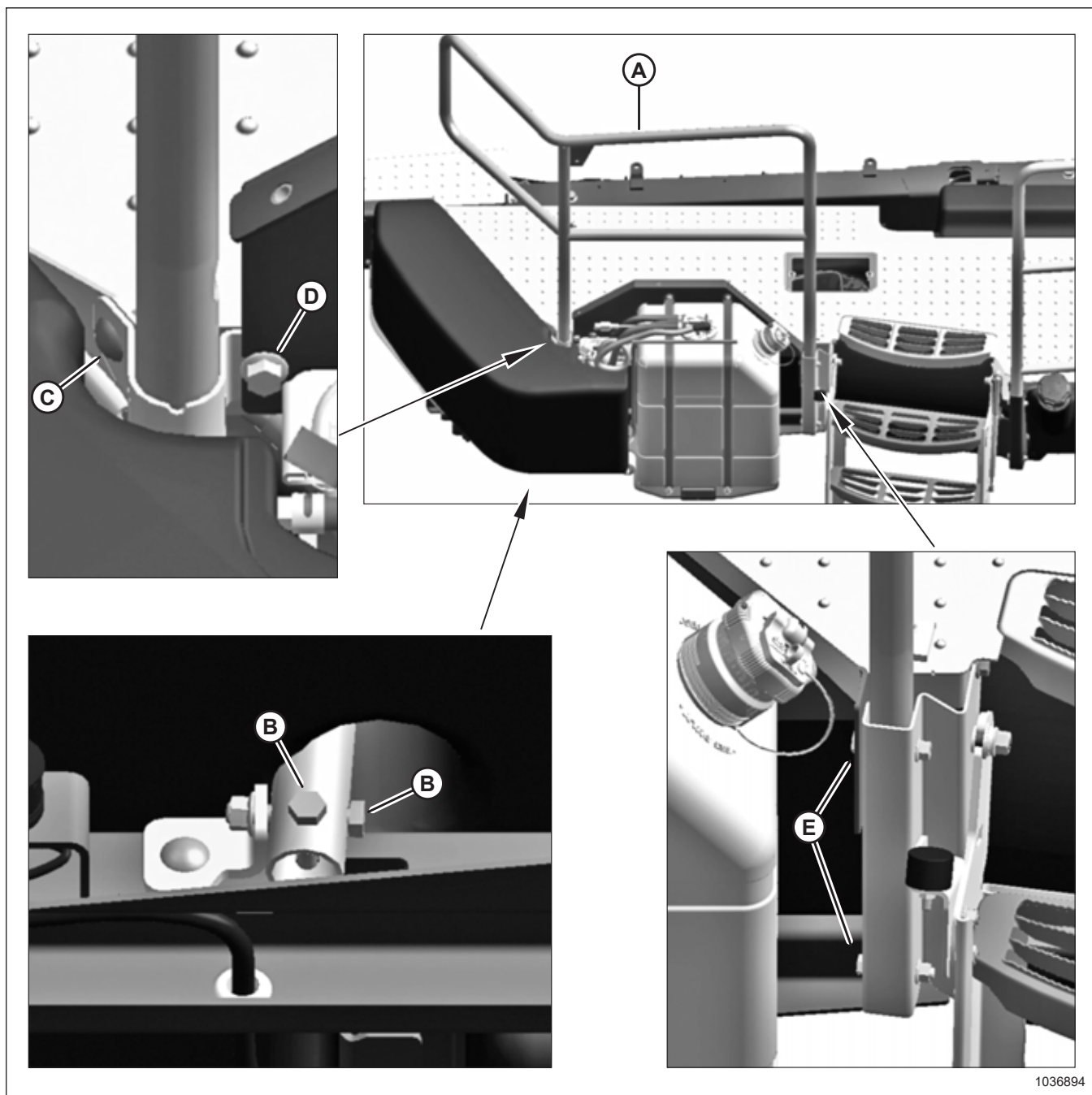
**Figure 3.79: DEF Tank Installation**

27. Attach the DEF tank assembly to the platform as follows:

- a. Attach the bottom of the DEF tank assembly to the platform using two M10 x 25 carriage head bolts and flange nuts (A). Do **NOT** tighten the hardware. The two bolts and nuts are shipped installed in the DEF tank mounting plate. The illustration shows the DEF tank as transparent for clarity.
- b. At the top of the platform, place washer (B) **BETWEEN** the DEF tank assembly and the platform, and attach the top of the DEF tank assembly to the platform using washer (B), M10 x 25 carriage head bolt and flange nut (C). Do **NOT** tighten the hardware.

28. Remove three M10 x 16 hex head bolts (D) from DEF tank cover (E). Remove cover (E). Retain the bolts and cover.



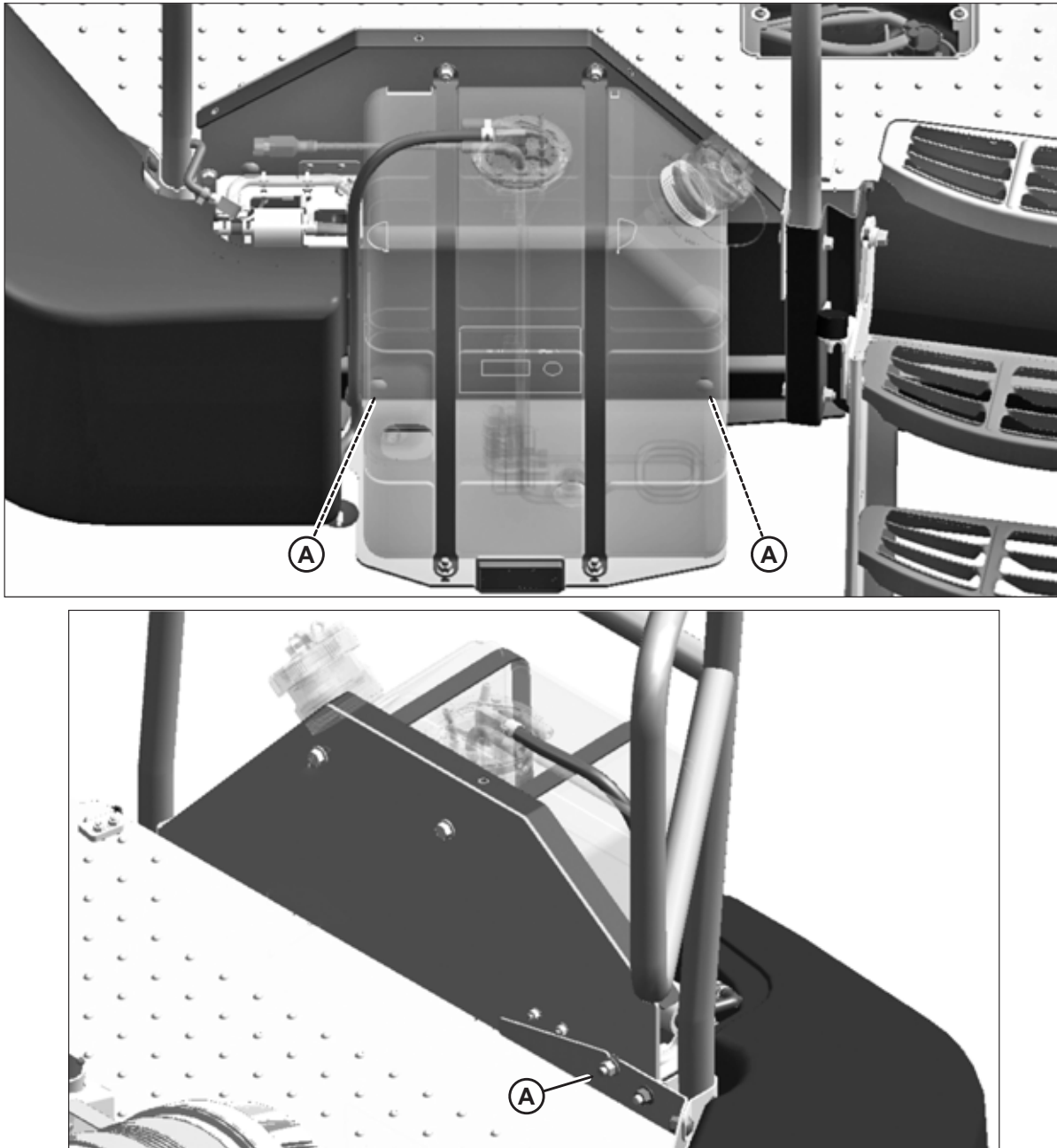


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**Figure 3.80: DEF Tank Installation**

29. Retrieve rear handrail (A). Remove all hardware (six nuts and bolts) and retain for installation.
30. Insert the rear handrail into the channel next to the DEF tank and the channel left of the steps.
31. Secure the bottom of the rail with two M10 x 60 hex bolts (B) and flange nuts.
32. Secure the rail near the DEF head with M10 x 20 carriage head bolt (C) and flange nut, and M10 x 25 hex flange bolt (D) and flange nut.
33. Secure the rail in the channel left of the steps with two M10 x 60 bolts (E) and nuts.
34. Torque all handrail hardware to 35 Nm (26 lbf-ft).

## ASSEMBLING WINDROWER



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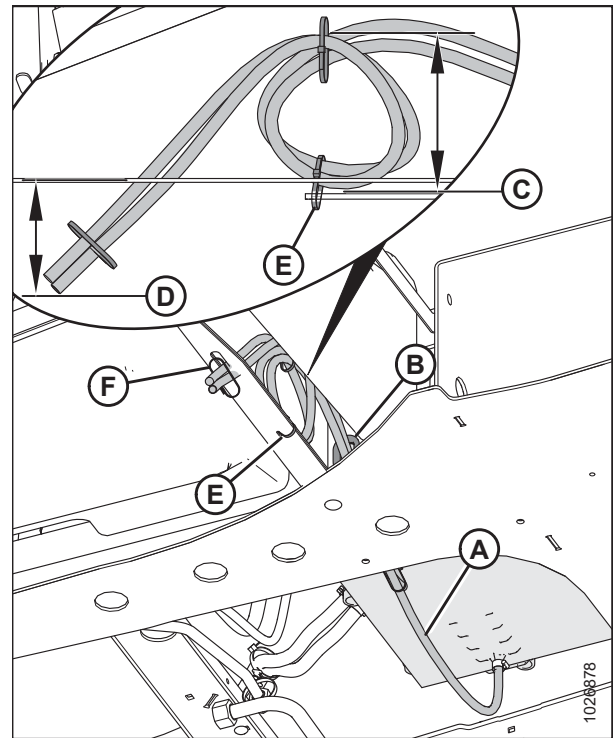
**Figure 3.81: DEF Tank Installation**

35. Tighten DEF mounting hardware at locations (A) to 35 Nm (26 lbf·ft).



## *Positioning the air conditioning drain hoses*

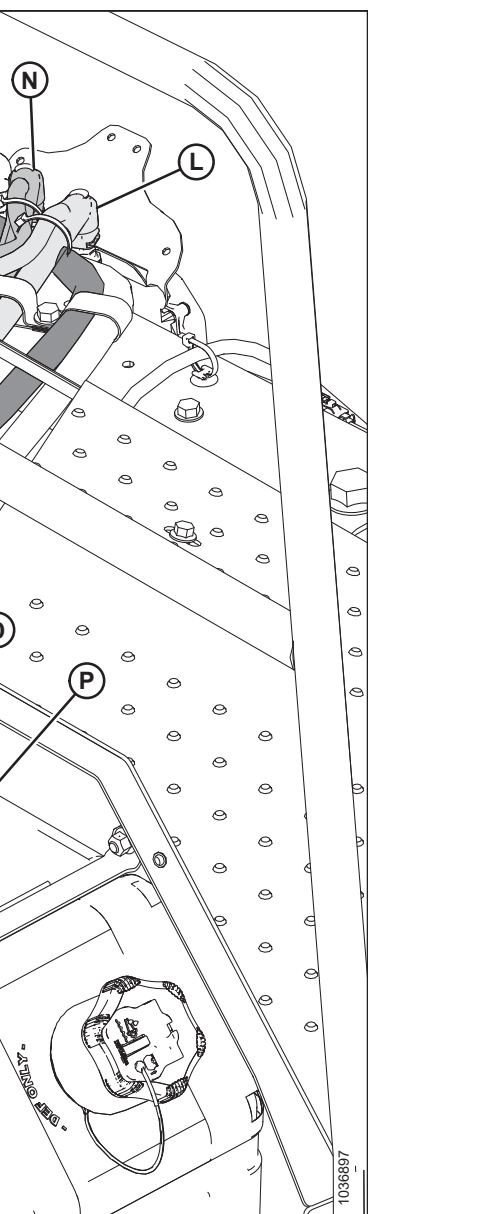
36. Route drain hoses (A) from air conditioning (A/C) unit through hole (B) in the frame and into the space between the front platform support and DEF tank.
37. Make a loop in drain hoses with cable ties. Loop height (C) should be 190 mm (7 1/2 in.) maximum; the remaining hose length (D) should hang 120 mm (4 3/4 in.) below bottom of the platform support.
38. Fasten the loop to slot (E) in the platform support with cable tie.
39. Pull the hose ends through hole (F) in the bottom of the platform support.



**Figure 3.82: A/C Drain Hoses**

## Tanks

ing purposes.



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- Retain clamps (B). Clamp the DEF heater platform (shown partially cut away) and retained clamps.

## Connecting fuel hoses

4. Remove the shipping connector from the fuel hoses. Retain the hose clamps for installation.
5. Using existing hose clamps, connect the supply hose, with the red tie, to fuel filter (A), and the return hose to fuel pump port (B).

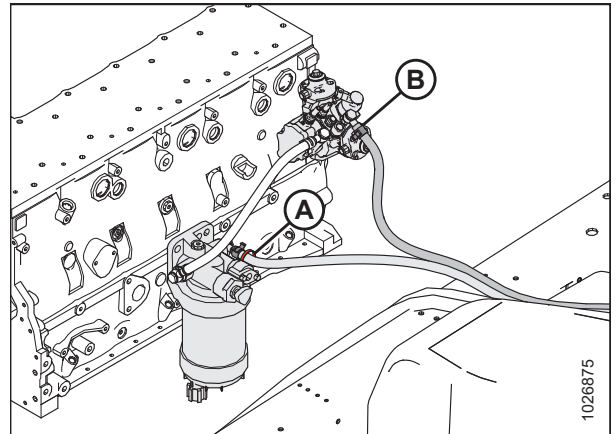


Figure 3.84: Fuel Hose Connections

6. Secure fuel hoses (A), DEF heater hoses (B), and DEF supply module hoses (C) to the frame with the existing P-clamps and torque bolts (D) to 22 Nm (16 lbf·ft).

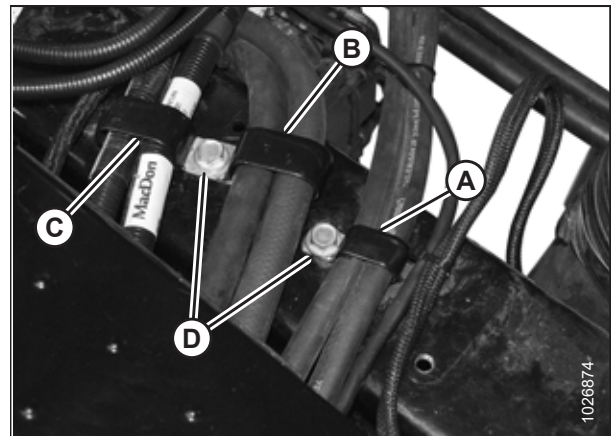


Figure 3.85: Securing Hoses to Frame with P-Clips

## Electrical connections

7. Remove the protective caps and connect the following three electrical connectors:
  - Connector (A) from inlet hose to receptacle P173-C
  - Connector (B) from backflow hose to receptacle P172-C
  - Connector (C) from DEF head interconnect P164-CB to receptacle C164-CA

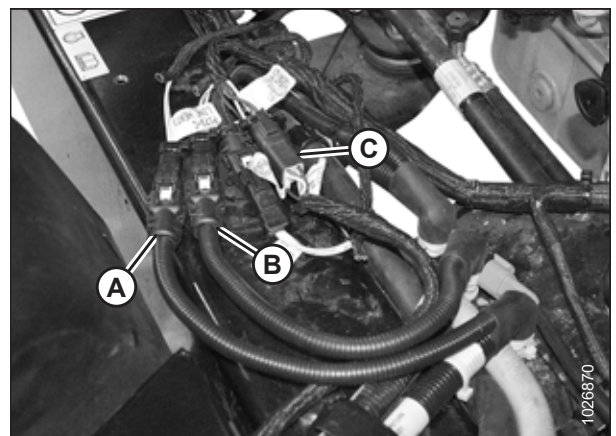
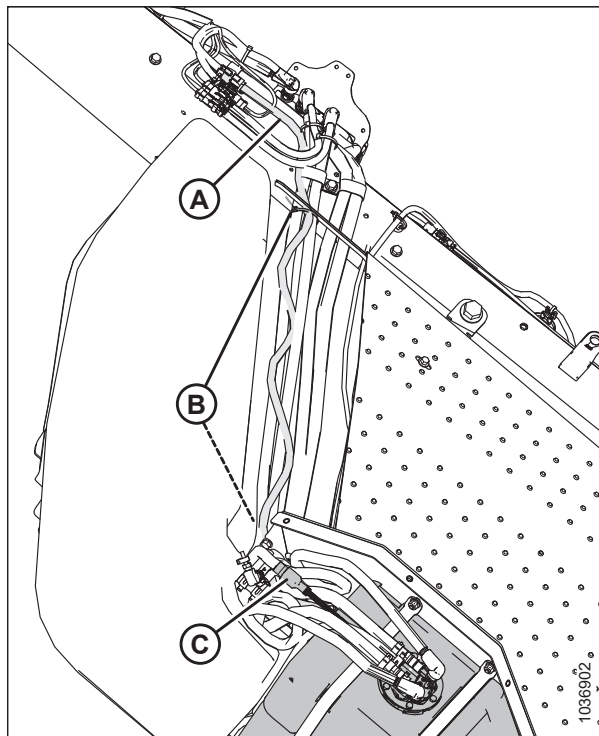


Figure 3.86: Electrical Connections

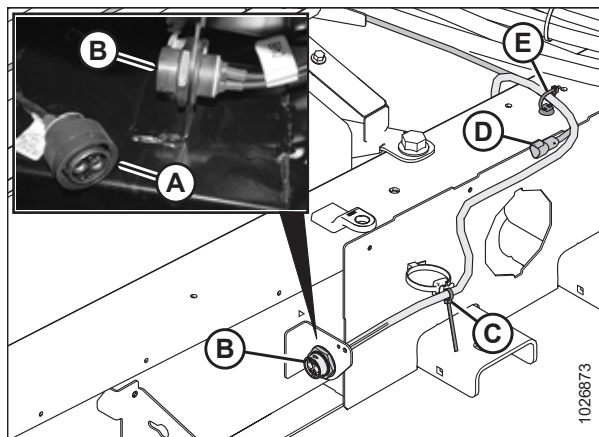
## ASSEMBLING WINDROWER

8. Secure DEF head interconnect harness (A) to the DEF supply module hose with two cable ties (B) (one shown).
9. Connect harness (A) to DEF tank connector (C).



**Figure 3.87: Cable Tie Locations**

10. Route round auxiliary power connector (B) (C40B) from the right platform to the bracket on the frame and secure with washer and nut.
11. Connect C40B (B) to C40A (A), and secure harness to air cleaner support pipe (pipe not shown) with large cable tie (C).
12. Remove the protective cap from fuel level sender connector (D) and plug into the chassis harness P220 (not shown).
13. Secure the fuel level sender harness to the auxiliary power harness with cable tie (E).



**Figure 3.88: Electrical Connections**

## ASSEMBLING WINDROWER

14. Reinstall DEF head cover (A) and secure it with three bolts (B). Torque bolts (A) to 17 Nm (12.5 lbf-ft).

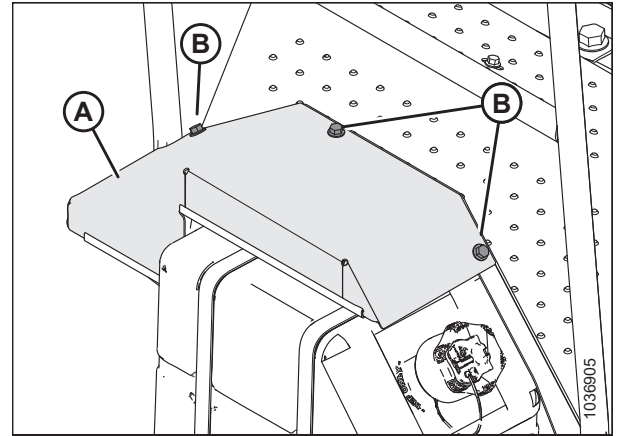


Figure 3.89: DEF Head Cover

15. Replace hose cover (B) and secure with two bolts (A).

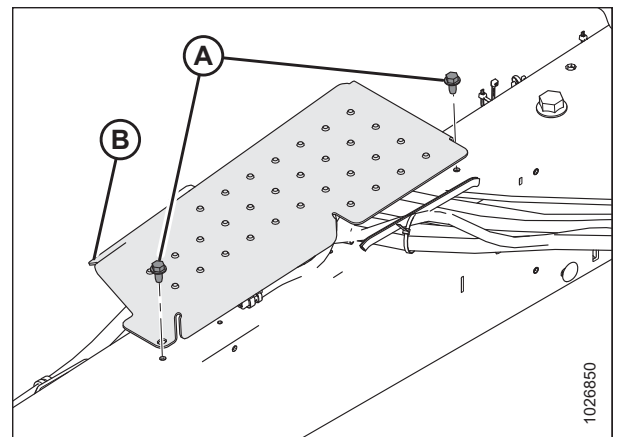


Figure 3.90: DEF Hose Cover

## 3.12 Positioning Mirror Arms

The mirror/light support arms require repositioning from shipping position to field position.

1. Loosen retaining nut (A) and pivot nut (B) on support arm (C).
2. Swivel support arm (C) forward 90° from shipping position to field position.

**IMPORTANT:**

Avoid pinching the wire harness when rotating the mirror arms.

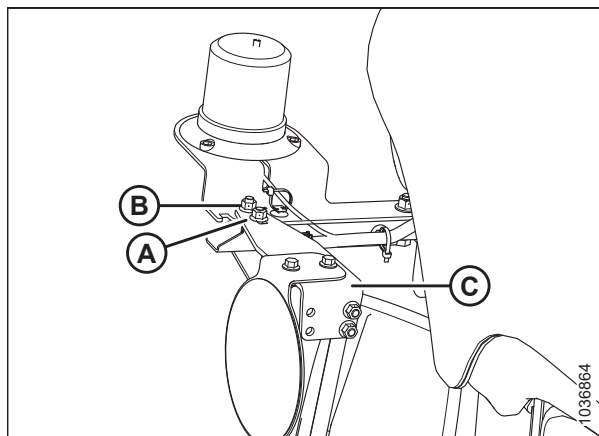


Figure 3.91: Mirror Arm in Shipping Position

3. Tighten retaining nut (A) to 37–41 Nm (28–30 lbf·ft).
4. Tighten pivot nut (B) to 24–27 Nm (18–20 lbf·ft).

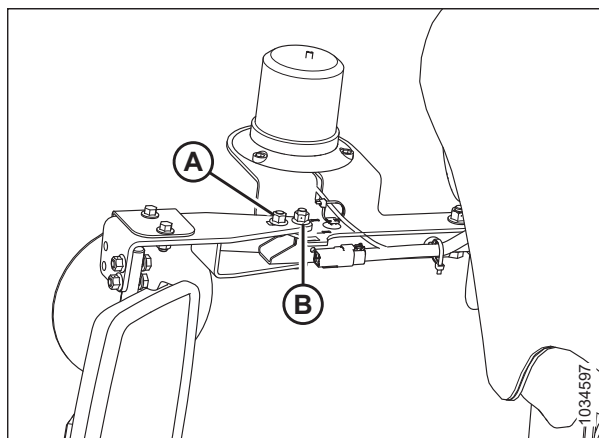


Figure 3.92: Mirror Arm in Field Position

5. To prevent pinching wires when adjusting mirror assemblies, ensure roof harness (A) and power mirror harness (B) (if installed) are secured with fir tree fasteners (C) to the mirror arm.
6. Repeat Step 1, page 84 to Step 5, page 84 at the opposite side.

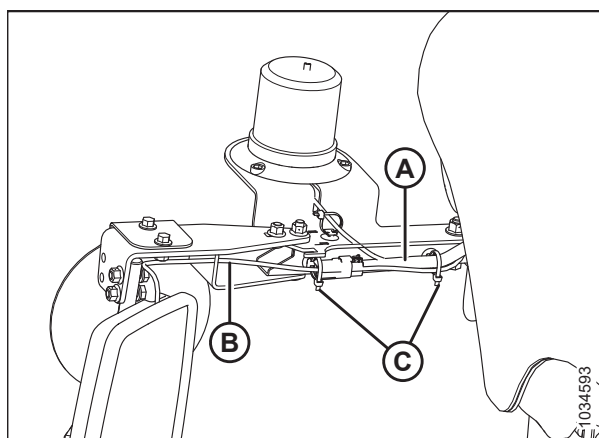


Figure 3.93: Mirror Arm in Field Position

### 3.13 Replacing or Removing Speed Indicator Sign Decal

A 25 km/h speed indicator sign (SIS) decal is already installed on the windrower from the factory. However, machines for use in different countries may require a different SIS decal or may not require an SIS decal at all.

1. Identify the required SIS decal according to your local jurisdiction. To replace the decal, proceed to Step 2, [page 85](#). To remove the decal/SIS bracket, proceed to Step 6, [page 86](#).

#### *Replacing the SIS decal*

2. Retrieve the appropriate SIS decal from the cab.
3. Locate existing SIS decal (A) on the left mirror arm.
4. Wipe the existing decal with a clean cloth to remove dirt and grease.

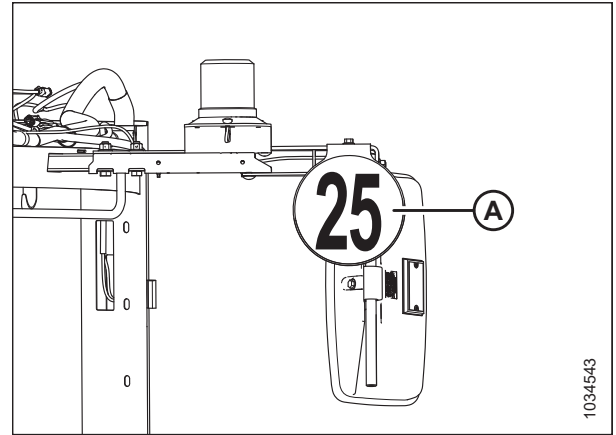


Figure 3.94: Existing Decal on Windrower

5. Apply appropriate decal (A), according to the local jurisdiction, over the existing 25 km/h decal.

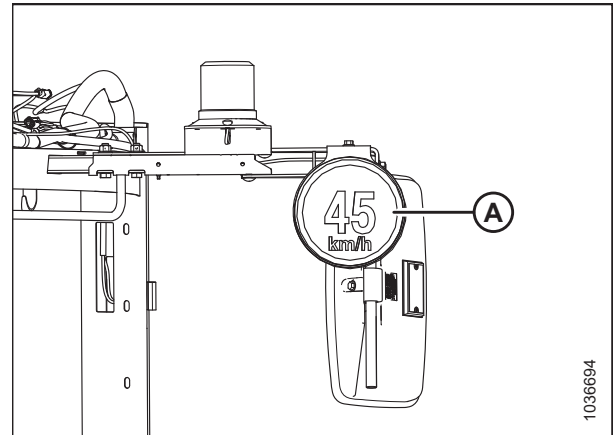


Figure 3.95: SIS Decal for UK

## ASSEMBLING WINDROWER

### *Removing the SIS decal/bracket*

6. Remove two bolts (A) and SIS bracket (B) from the left mirror arm.

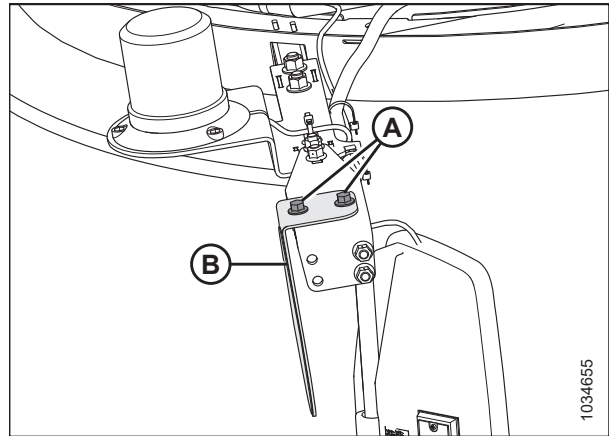


Figure 3.96: Existing SIS Bracket on Windrower



### 3.14 Installing Air Inlet Duct

The air inlet duct prevents large debris from entering the engine.

1. Retrieve the air inlet duct from inside the cab and remove the plastic cover from the breather tube.
2. Ensure there are no parts or debris inside the inlet duct.
3. At the rear right corner of the cab roof, set air inlet duct (A) over the breather tube, and rotate to align the predrilled holes for setscrew (B).
4. Tighten setscrew (B) and tighten tube clamp (C) to secure the duct onto the breather tube.

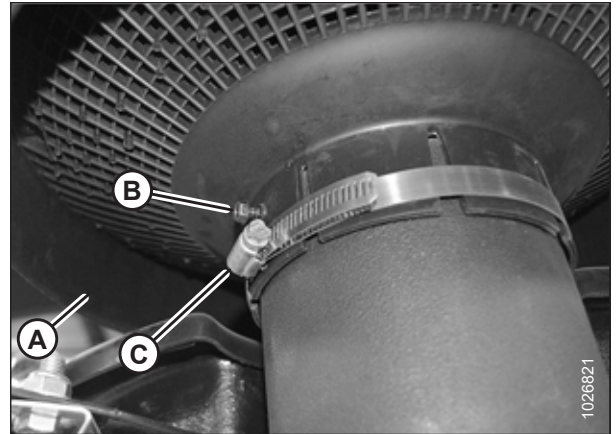


Figure 3.97: Air Inlet Duct

### 3.15 Installing Signal Light Placards, Markers, and Registration Plate Mount

Follow these steps to install the signal light placards, markers, and registration plate mount.

Two signal light placards (A) are located on the cab side, and two signal light placards (B) on the walking beam side with two end markers (C). The registration plate mount (D) is located just below the cab at the front.

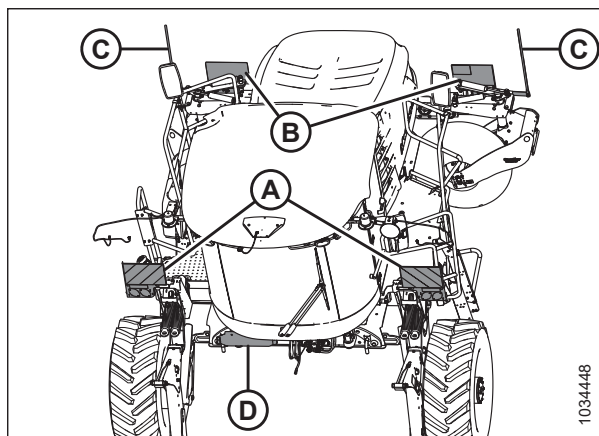


Figure 3.98: M1170NT5 Windrower

1. Retrieve the four signal light placards, two markers, registration plate mount and bracket, and hardware from the cab.

#### *Cab-side signal light placard*

2. Position left signal light placard (A) on left cab-forward drive leg (B), and loosely secure with two M10 x 30 bolts and lock nuts (C).

#### **NOTE:**

Bolts are installed from under the bracket.

3. Adjust left signal light placard (A) so that there is a distance of 58 mm (2 1/4 in.) (D) from the edge of the signal light placard bracket to the edge of drive leg tower, and 37 mm (1 1/2 in.) (E) distance at the rear of the plate as shown.
4. Once the required distance is achieved, tighten hardware (C) to secure signal light placard (A) to the drive leg tower.

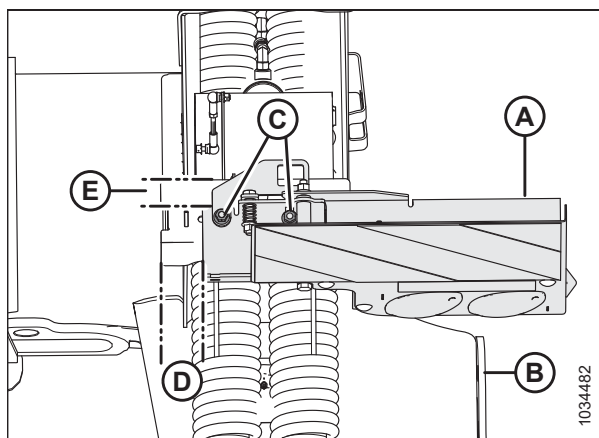
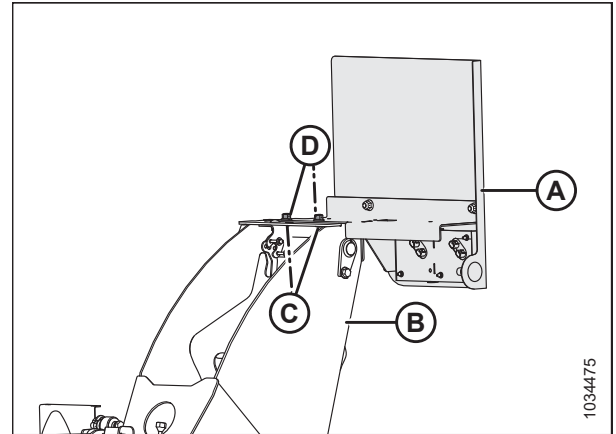


Figure 3.99: Cab-Side Signal Light Placard – Left Cab-Forward, Top View

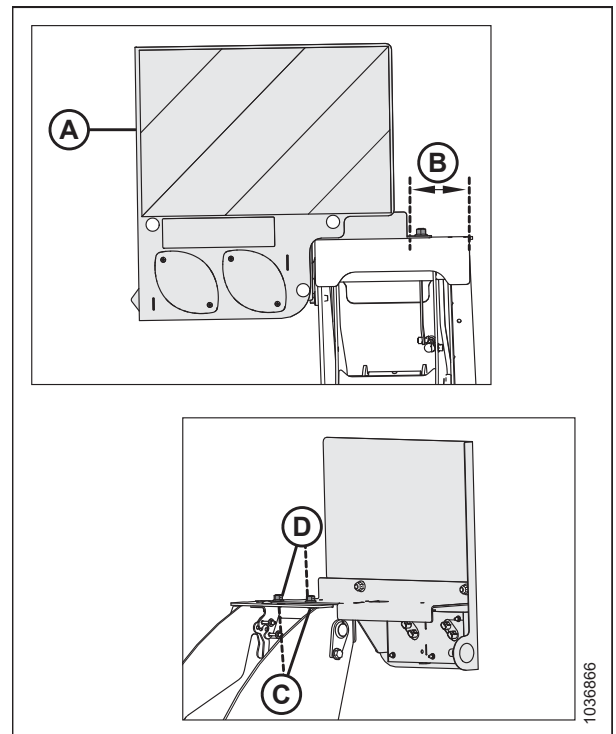
## ASSEMBLING WINDROWER

5. Position right signal light placard (A) on right cab-forward drive leg (B), and loosely secure with two M10 x 30 bolts (C) and lock nuts (D).



**Figure 3.100: Cab-Side Signal Light Placard – Right Cab-Forward**

6. Adjust right signal light placard (A) so that there is a distance of 58 mm (2 1/4 in.) (B) from the edge of the signal light placard bracket to the edge of drive leg tower.
7. Once the required distance is achieved, tighten hardware (C) and (D) to secure signal light placard (A) to the drive leg tower.



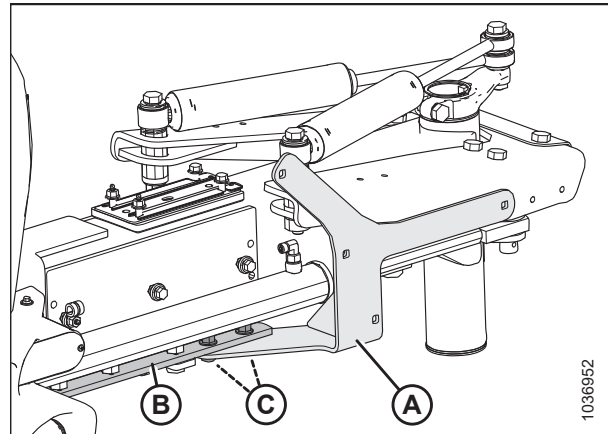
**Figure 3.101: Cab-Side Signal Light Placard – Right Cab-Forward**

## *Walking beam signal light placard*

8. Install mount (A) to walking beam (B) using bolts (C) and nuts. Ensure the mount face is parallel to the walking beam and is positioned as far away from the walking beam as possible to ensure clearance to the shimmy shock mounts.

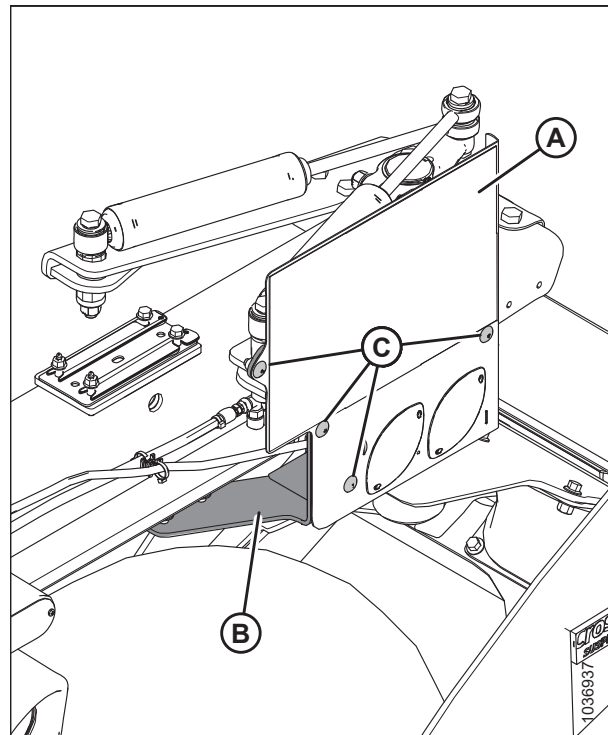
### **NOTE:**

Make sure the heads of bolts (C) are on the bottom side of mount (A).



**Figure 3.102: Walking Beam Signal Light Placard in – Right Cab-Forward**

9. Install placard (A) onto mount (B) using three M10 X 25 carriage head bolts and nuts (C). Leave the inboard nut loose for wiring harness P-clip later.
10. Repeat Step 8, page 90 to Step 9, page 90 at the opposite side.



**Figure 3.103: Walking Beam Signal Light Placard – Right Cab-Forward**

## ASSEMBLING WINDROWER

### End markers

11. Position right end marker (A) on the outboard of shock mount plate (B) as shown, and secure with two M10 X 20 screws (C).
12. Repeat at the opposite side.

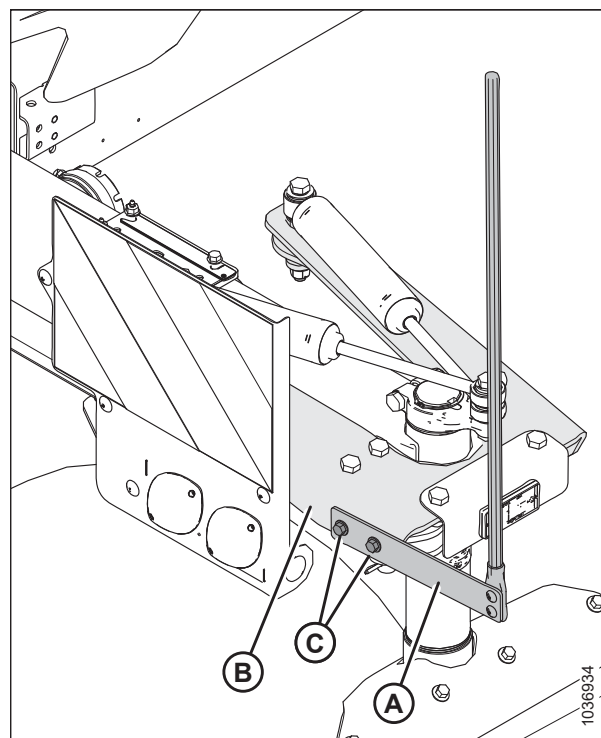


Figure 3.104: End Marker – Right Cab-Forward

### Registration plate mount

13. Remove two bolts (A) from the underside of the cab. Position registration mount (B) to the underside of the cab using two bolts (A) removed.

**NOTE:**

Mounting position may differ if autosteer is preinstalled.

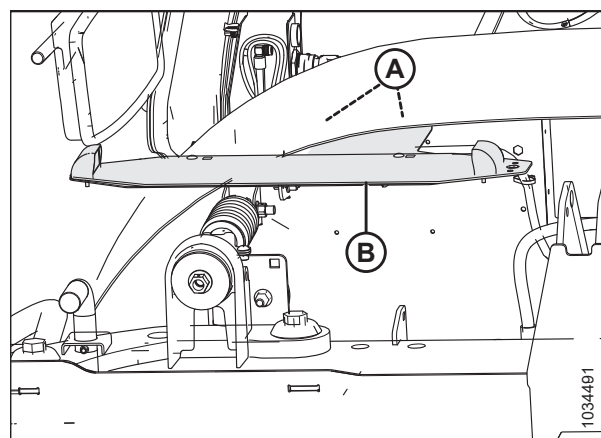
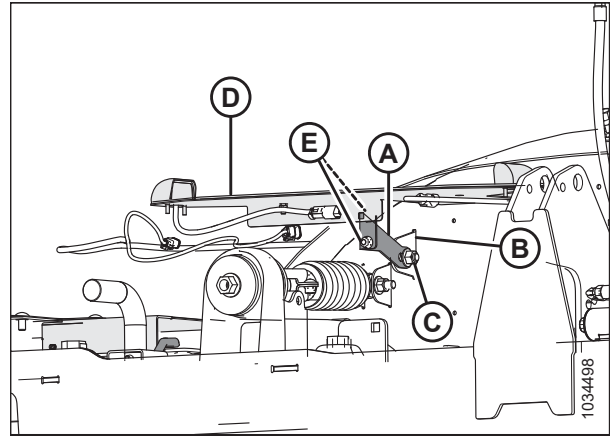


Figure 3.105: Registration Plate Mount, View from under Cab

## ASSEMBLING WINDROWER

14. Attach bracket (A) to tab (B) on the underside of the cab using M12 hardware (C) supplied with the mount.
15. Attach bracket (A) to registration mount (D) using two carriage head bolts and nuts (E) removed in Step [2, page 42](#).



**Figure 3.106: Registration Plate Mount, View from under Cab**

### 3.16 Connecting Signal Light Placards and Registration Plate Electrical Harness

Follow these steps to connect the signal light placards and registration plate mount electrical harness.

The narrow transport lighting leg harness (A) is routed next to the wheel legs and connects to the signal light placards (B) on the cab side and to the narrow transport main harness (C). The narrow transport main harness (C) connects to the registration plate mount (E) just below the cab, and is routed to the walking beam to connect to the signal light placards (D).

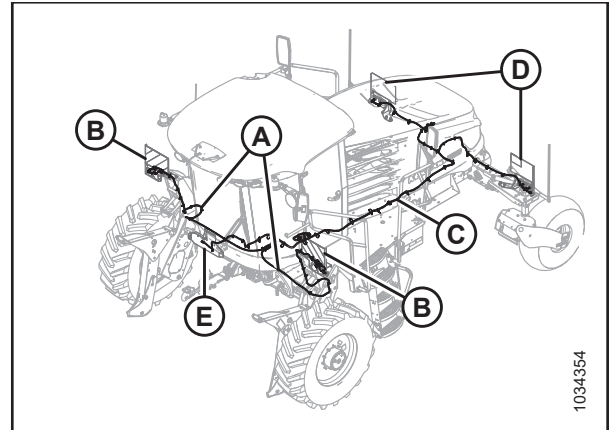


Figure 3.107: Electrical Harness Routing

#### *Cab-forward signal light placards harness*

1. Route left lighting leg harness (A) behind left signal light placard (B) mounting plate as shown.
2. Loosely secure harness to placard lighting bracket with a cable tie (C).

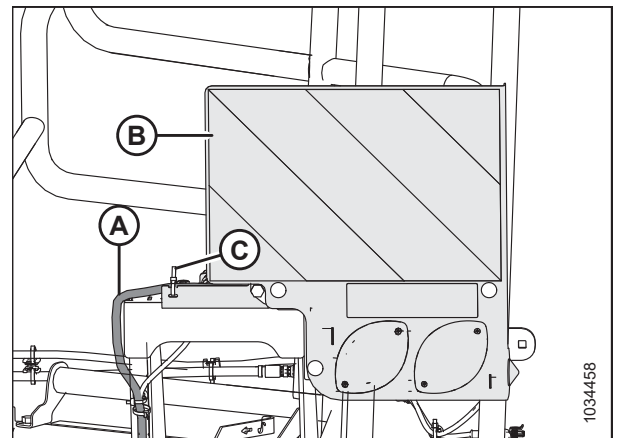


Figure 3.108: Left Cab-Forward Signal Light Placard

3. Insert the harness down the plate hole.
4. Connect the lighting leg harness to the left signal light placard as follows:
  - a. Plug P295S (A) to side turn signal receptacle.
  - b. Plug P295 (B) to A side receptacle.
  - c. Plug P267B (C) to B side receptacle.
  - d. Plug P267A (D) to A side receptacle.
5. Secure harness with fir tree fasteners (E), and tighten cable tie (F).

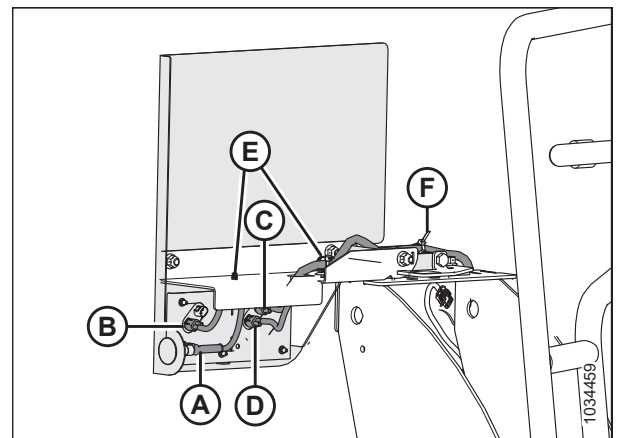


Figure 3.109: Left Cab-Forward Signal Light Placard

## ASSEMBLING WINDROWER

6. Route right lighting leg harness (A) behind right signal light placard (B) mounting plate.

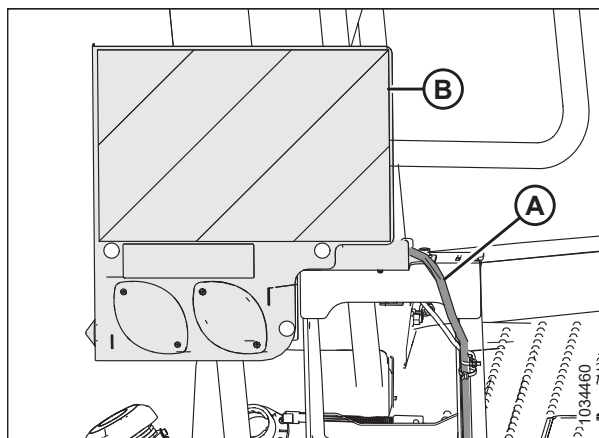


Figure 3.110: Right Cab-Forward Signal Light Placard

7. Loosely secure harness to signal light placard bracket with fir tree fasteners (A).
8. Insert the harness down the plate hole.
9. Connect the lighting leg harness to the right signal light placard receptacles as follows:
  - a. Plug P295S (B) to side turn signal receptacle.
  - b. Plug P295 (C) to A side receptacle.
  - c. Plug P267B (D) to B side receptacle.
  - d. Plug P267A (E) to A side receptacle.
10. Secure plug P295 (C) harness to bracket with fir tree fastener (F).
11. Tighten fir tree fasteners (A).

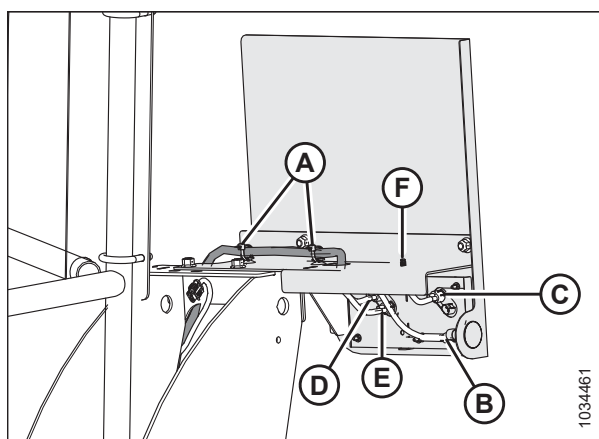


Figure 3.111: Right Cab-Forward Signal Light Placard

### Registration plate mount

12. Connect main harness (A) to the registration plate mount harness as follows:
  - a. Plug P298 (B) to right LED receptacle.
  - b. Plug P297 (C) to left LED receptacle.
13. Secure the harness to the registration plate mount using p-clips (D) as shown.

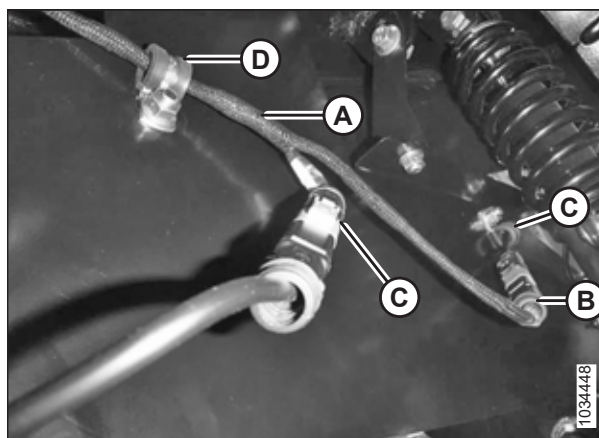


Figure 3.112: Harness Connection, Registration Plate Mount — View from below the Cab



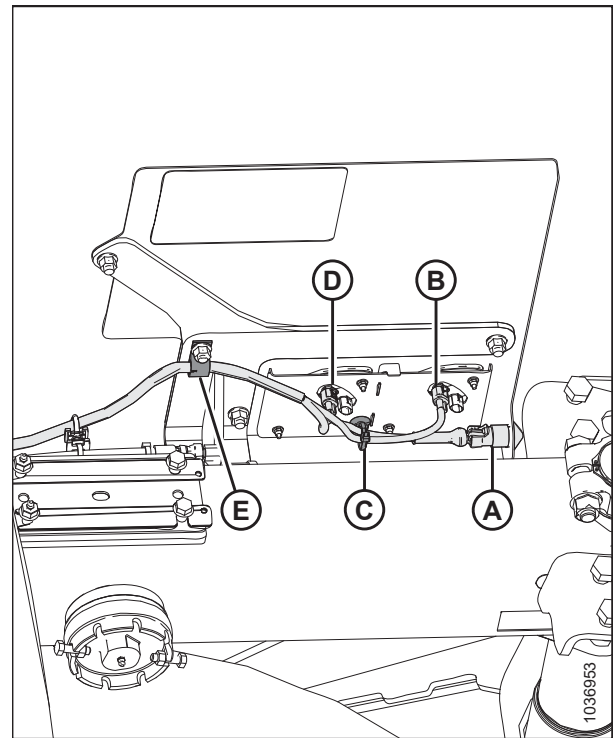
## *Walking beam signal light placards harness*

14. Connect the main harness to the right signal light placard receptacles as follows:

**NOTE:**

Some parts have been removed from the illustration at right for clarity.

- a. Plug P293S (A) to side turn signal receptacle.
  - b. Plug P293 (B) to A side receptacle.
  - c. Plug P265 (C) to A side receptacle.
15. Secure the main harness on signal light placard bracket using p-clip (E).
  16. Install fig tree fastener (D) to the light mount, and secure harness of plugs P293S (A) and P293 (B) together.
  17. Repeat Step [14, page 95](#) to Step [16, page 95](#) at the opposite side.



**Figure 3.113: Walking Beam Signal Light Placard – Right Engine-Forward**

### 3.17 Installing Hydraulic Coupler Holder

The hydraulic coupler holder stores the quick-disconnect coupler/hose when the hydraulic system is not configured for rotary disc headers.

1. Remove nuts (A) from the underside of the knife/reel multicoupler and retain the nuts for installation.

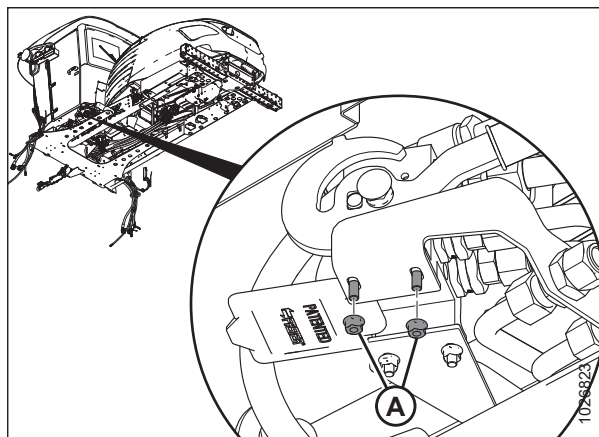


Figure 3.114: Rear Hydraulic Multicoupler

2. Retrieve hydraulic coupler holder (A) from inside the windrower cab.
3. Install coupler holder (A) onto the underside of multicoupler using existing hex head screws, and secure it with existing nuts (B).

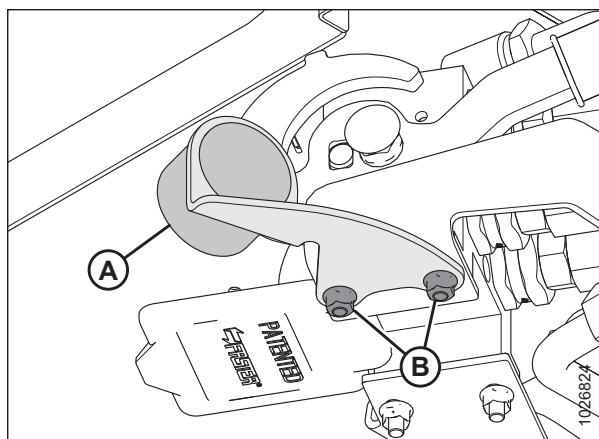


Figure 3.115: Coupler Holder Installed

### 3.18 Installing Engine-Forward Mirrors

Follow these steps to install the engine-forward mirrors.

1. Retrieve left and right mirror mounts (A) from the cab.

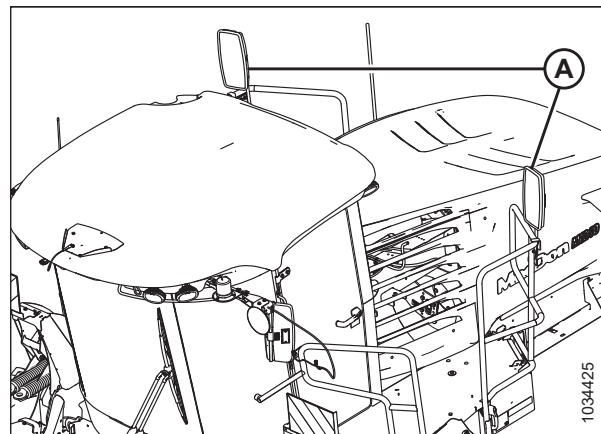


Figure 3.116: Engine-Forward Mirror Locations

2. Position left mirror so that convex mirror (A) is on top. Secure the mirror to plate (B) using three M10 X 25 bolts and nuts (C). Adjust mirror angle to personal preference.

**NOTE:**

Ensure offset of the mirror is pointed outboard.

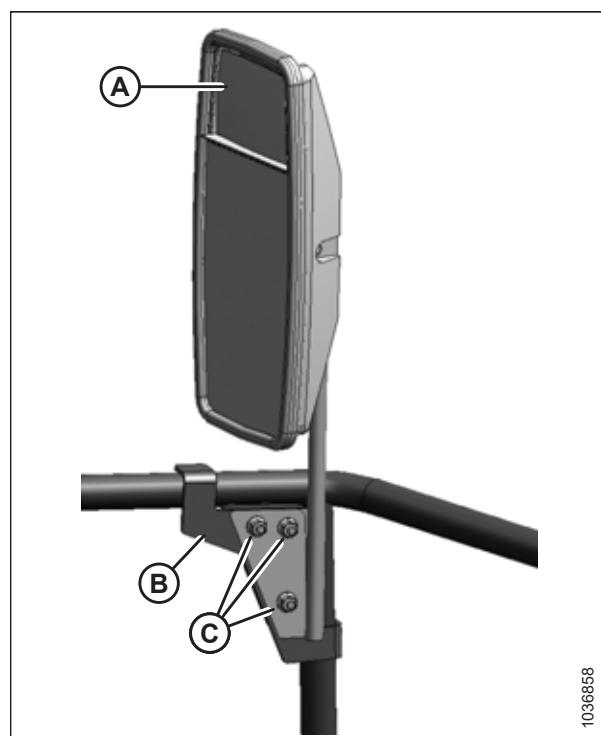


Figure 3.117: Left Engine-Forward Mirror

## ASSEMBLING WINDROWER

3. Position right mirror so that convex mirror (A) is on top. Secure the mirror to plate (B) using three M10 X 25 bolts and nuts (C). Adjust mirror angle to personal preference.

**NOTE:**

Ensure offset of the mirror is pointed outboard.

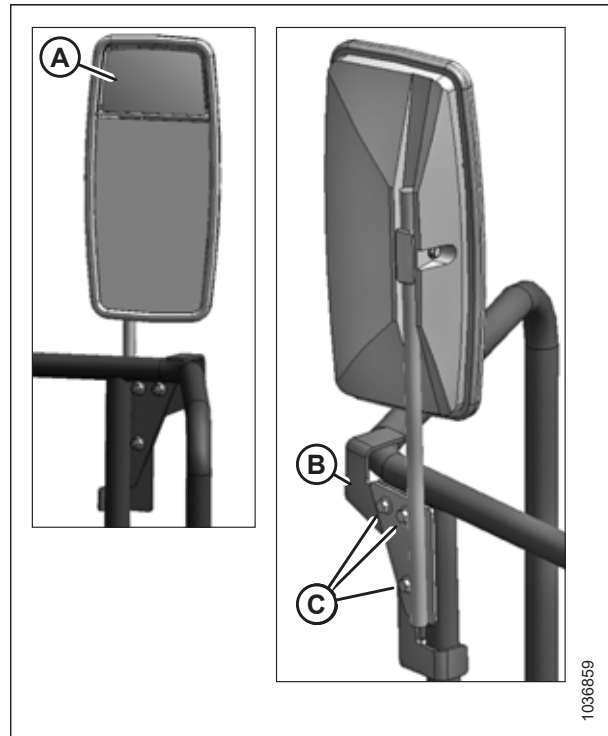


Figure 3.118: Right Engine-Forward Mirror

### 3.19 Installing Rear Light Assembly and Optional Ballast Package

Ballast kits are for draper headers only. When operating the windrower with a heavy draper header, ballast needs to be added to the aft end. Use the following table to determine the amount of ballast required. Depending on ballast requirements, follow instructions to install rear light assembly with or without ballast package.

Refer to [4.1.14 Checking Tire Pressure, page 132](#) for proper tire pressures when operating with the applicable header.

**NOTE:**

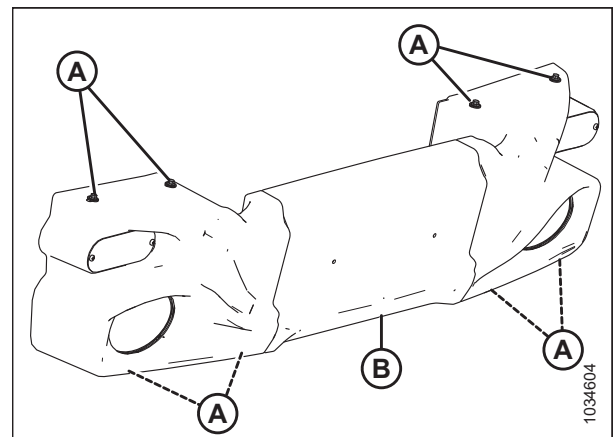
A base kit (MD #B6053) contains eight 20.4 kg (45 lb.) weights for a total weight of 163 kg (360 lb.).

**Table 3.2 Ballast**

Header Type	Description	Installed Options	Base Kit	Additional Kits	Additional Float Springs
D125X	25 foot, single reel, double knife, timed	–	0	0	0
D130XL	30 foot, single reel, double knife, timed	Transport	1	0	0
D130XL	30 foot, single reel, double knife, timed	Transport + upper cross auger + vertical knives	1	0	MD #B6047
D135XL	35 foot, single reel, double knife, untimed	Base	1	0	0
D135XL	35 foot, single reel, double knife, untimed	Transport	1	0	MD #B6047
D135XL	35 foot, single reel, double knife, untimed	Transport + upper cross auger + vertical knives	1	0	MD #B6047
D135XL	35 foot, double reel, double knife, untimed	Base	1	0	0
D135XL	35 foot, double reel, double knife, untimed	Transport	1	0	MD #B6047
D135XL	35 foot, double reel, double knife, untimed	Transport + upper cross auger + vertical knives	1	0	MD #B6047

**Installing rear light assembly – no ballast package required**

1. Remove eight bolts and washers (A) from the rear light assembly and remove bezel (B).



**Figure 3.119: Rear Light Bezel Assembly**

## ASSEMBLING WINDROWER

2. Remove and retain nut (A), anti-rotation bolt (B), two bolts (C), and cover (D) behind each light support.

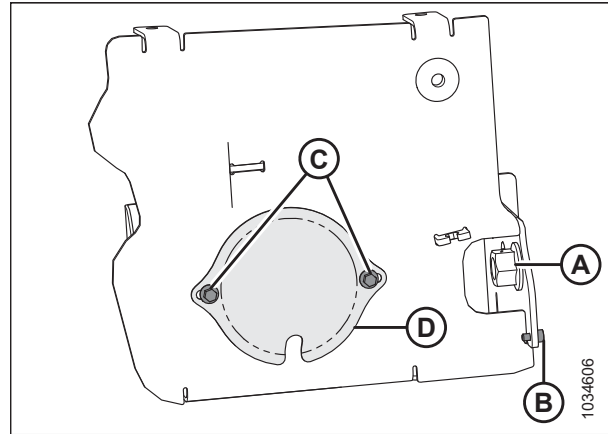


Figure 3.120: Left Engine-Forward Rear Light Support

3. Align connector (A) and plug engine forward headlight harness into headlight (B):

- Plug P214 to the right engine-forward headlight
- Plug P213 to the left engine-forward headlight

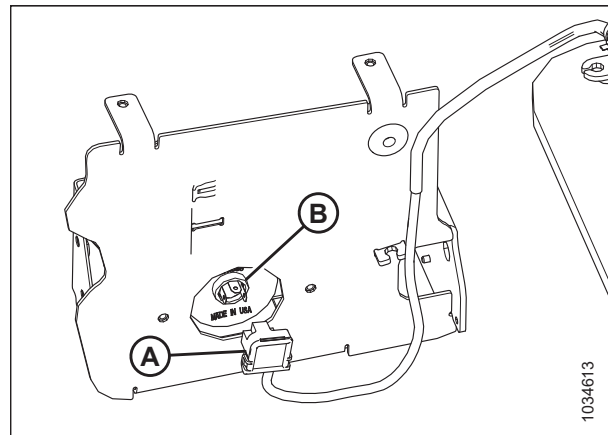


Figure 3.121: Left Engine-Forward Rear Light Support

4. Reinstall cover (A) using two bolts (B).
5. Press headlight harness (C) into clip (D) on the light support.

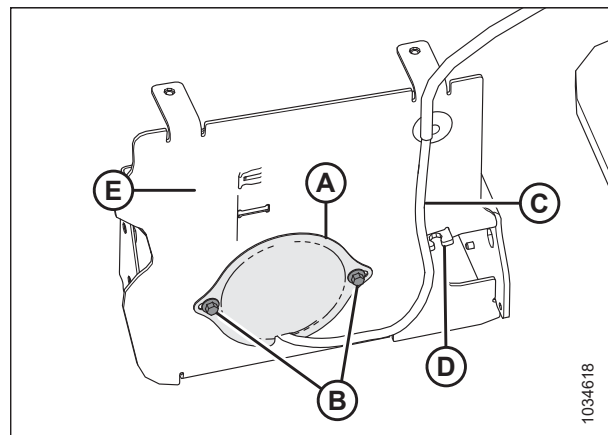


Figure 3.122: Left Engine-Forward Rear Light Support

## ASSEMBLING WINDROWER

6. Mount light support (A) to stud (B) on the rear pivot support with existing nut (C).
7. Reinstall the anti-rotation bolt removed in Step 2, [page 100](#).
8. Repeat Step 2, [page 100](#) to Step 7, [page 101](#) at the opposite side.

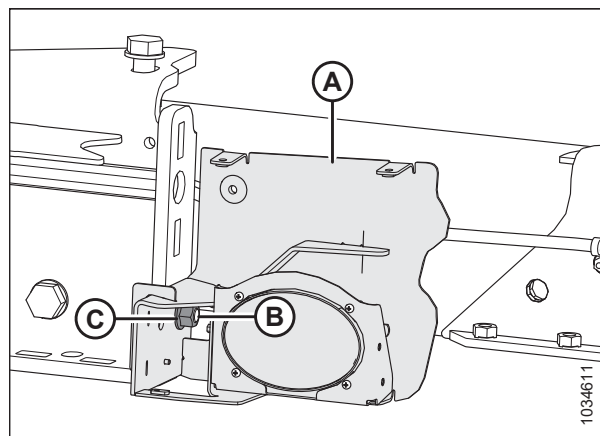


Figure 3.123: Left Engine-Forward Rear Light

9. Using eight bolts and washers (A), attach rear light bezel (B) to the light supports.

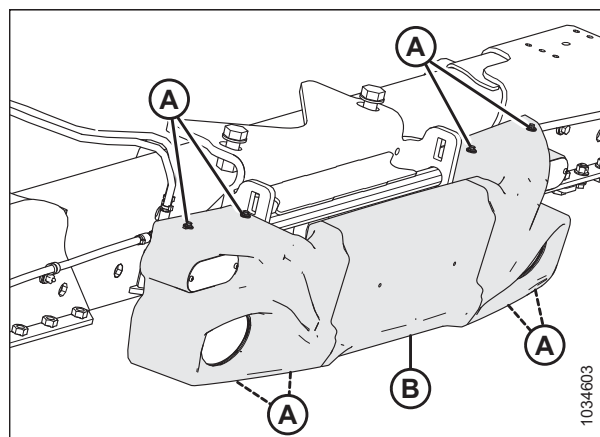


Figure 3.124: Rear Light Bezel Assembly

### ***Installing rear light assembly – ballast required***

1. Refer to Table 3.2, [page 99](#) to determine ballast to add to the windrower.
2. Separate light bezel assembly (A) by removing six hex screws (B).

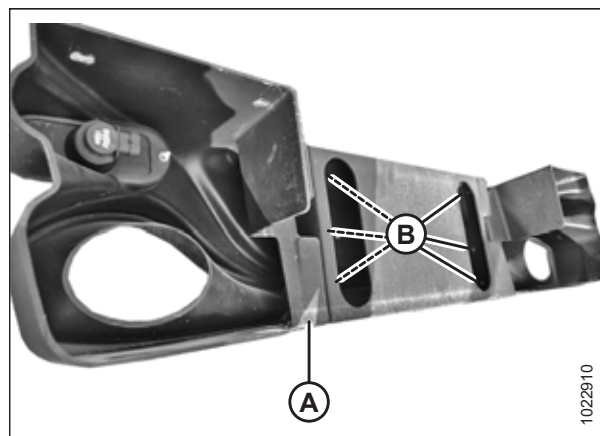


Figure 3.125: Bezel Assembly

## ASSEMBLING WINDROWER

### NOTE:

- Retain center portion (A) of light bezel assembly for reinstallation when the ballast is removed.
- Install six hex screws (B) on side bezels for safekeeping. These hex screws will be used when reinstalling the center portion of the light bezel.

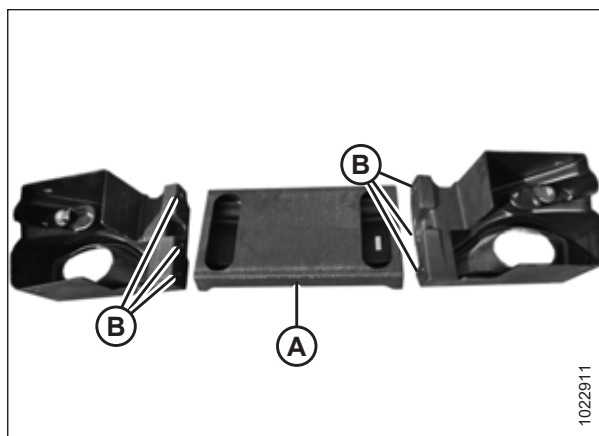


Figure 3.126: Bezel Assembly

### CAUTION

To avoid injury, keep fingers clear of weight bracket when installing weights.

3. Install weights (A) from the outboard side and slide to the middle of the bracket on the walking beam.
4. Install retaining bracket (B) on each side of the weight bundle.

#### IMPORTANT:

Ensure retaining bracket (B) engages slot (C) in the bracket.

5. Install rod (D) through retaining bracket and weights with spacers (E) as required.
6. Secure with nuts (F) and tighten.

#### IMPORTANT:

Ensure nuts (F) are flush with the rod.

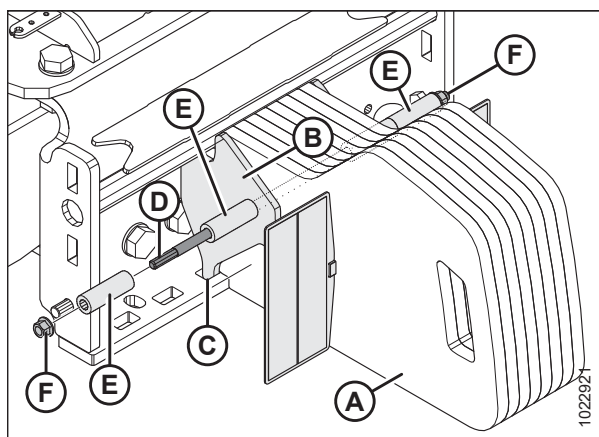


Figure 3.127: Weights Installed

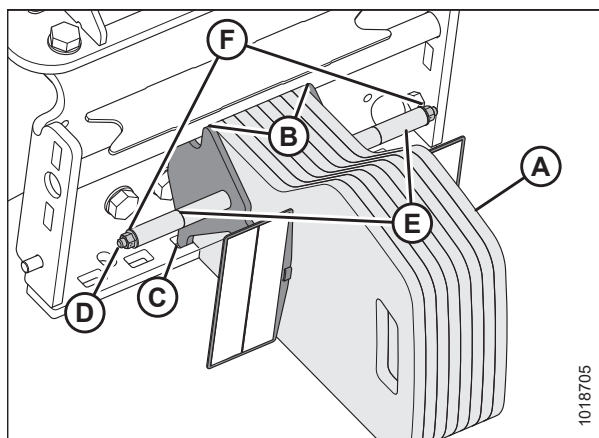


Figure 3.128: Base Kit – 163 kg (360 lb.)



## ASSEMBLING WINDROWER

7. Move latch (A) towards the right cab-forward side of the windrower.
8. Grasp louver (B) and lift the hood to open.

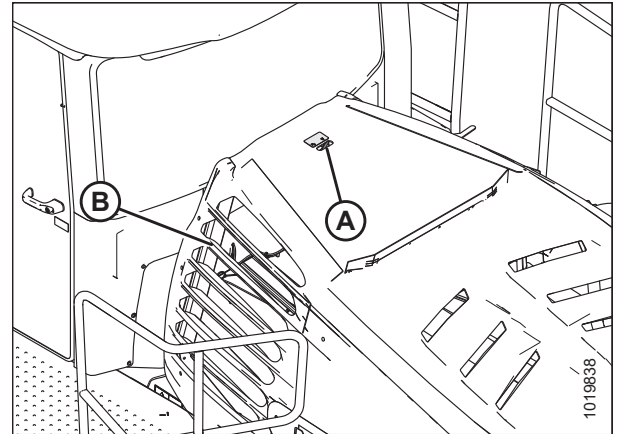


Figure 3.129: Engine Compartment Hood

9. Bring left side bezel (A) close to the frame and connect plug P215 to the back of red tail/brake light (E).
10. Loosely attach left side bezel (A) to frame with four hex flange bolts (B).
11. Repeat Step 8, page 103 and Step 9, page 103, attaching plug P210 at right side bezel (C).
12. Turn the ignition key to the RUN position, and ensure that rear swath lights (D) and red tail/brake lights (E) are working.
13. If the lights are working, tighten hex flange bolts (B) to secure the left and right light bezels.

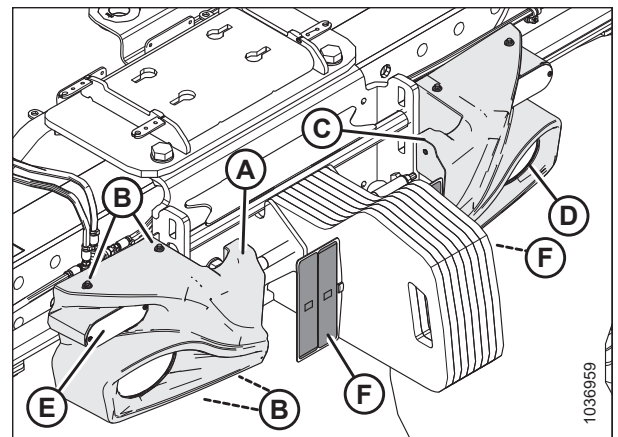


Figure 3.130: Rear Light Bezel with Ballast

### IMPORTANT:

Ensure rear swath lights (D) are centered in the light bezel.

14. Remove reflectors (F).

## 3.20 Lubrication

Proper lubrication is essential to ensuring the service life of the windrower.

For information on the type of lubricants to use, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).

### 3.20.1 Greasing Procedure

Add grease to these fittings before delivering the windrower. Be sure to leave a small amount of grease on top of each fitting to prevent contamination.

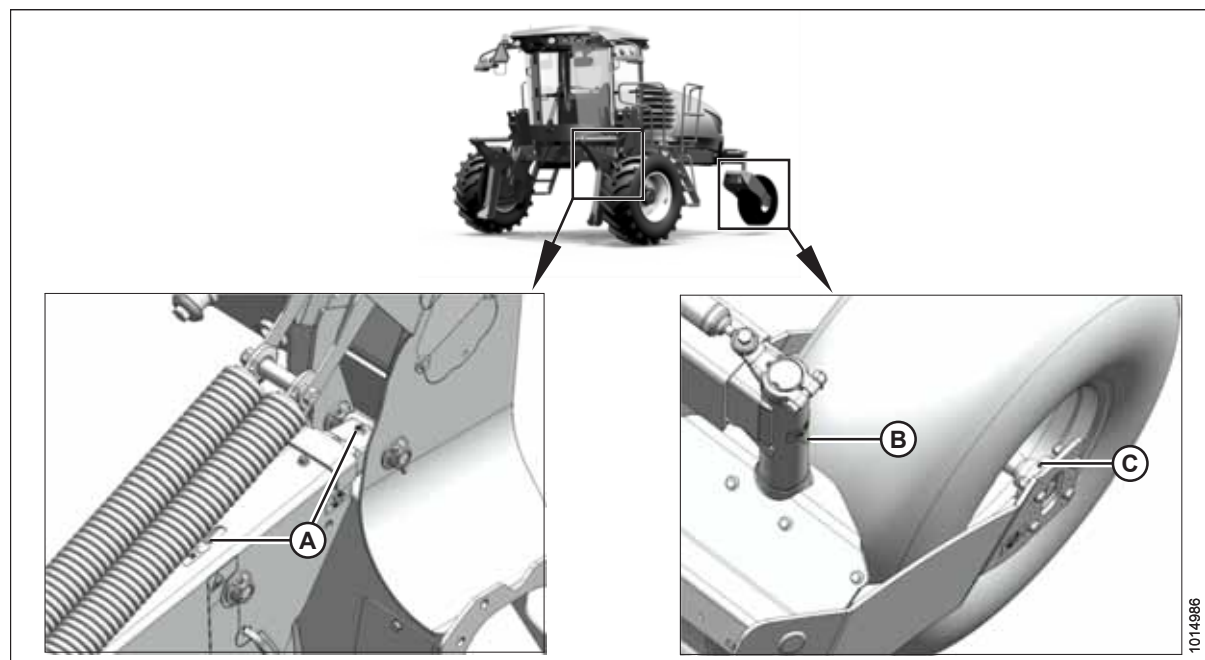
#### DANGER

**To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.**

1. To avoid injecting dirt and grit, wipe each grease fitting with a clean cloth before greasing.
2. Inject grease through the fitting with a grease gun until the grease overflows the fitting, except where noted. For specifications, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).
3. Leave excess grease on the fitting to keep out dirt.
4. Replace any loose or broken fittings immediately.
5. If a fitting will **NOT** take grease, remove and clean it thoroughly. Also clean the grease passageway. Replace the fitting if necessary.

### 3.20.2 Grease Points

Add grease to these fittings before delivering the windrower. Be sure to leave a small amount of grease on top of each fitting to prevent contamination.



**Figure 3.131: Grease Points**

A - Top Link (2 Places) (Both Sides)

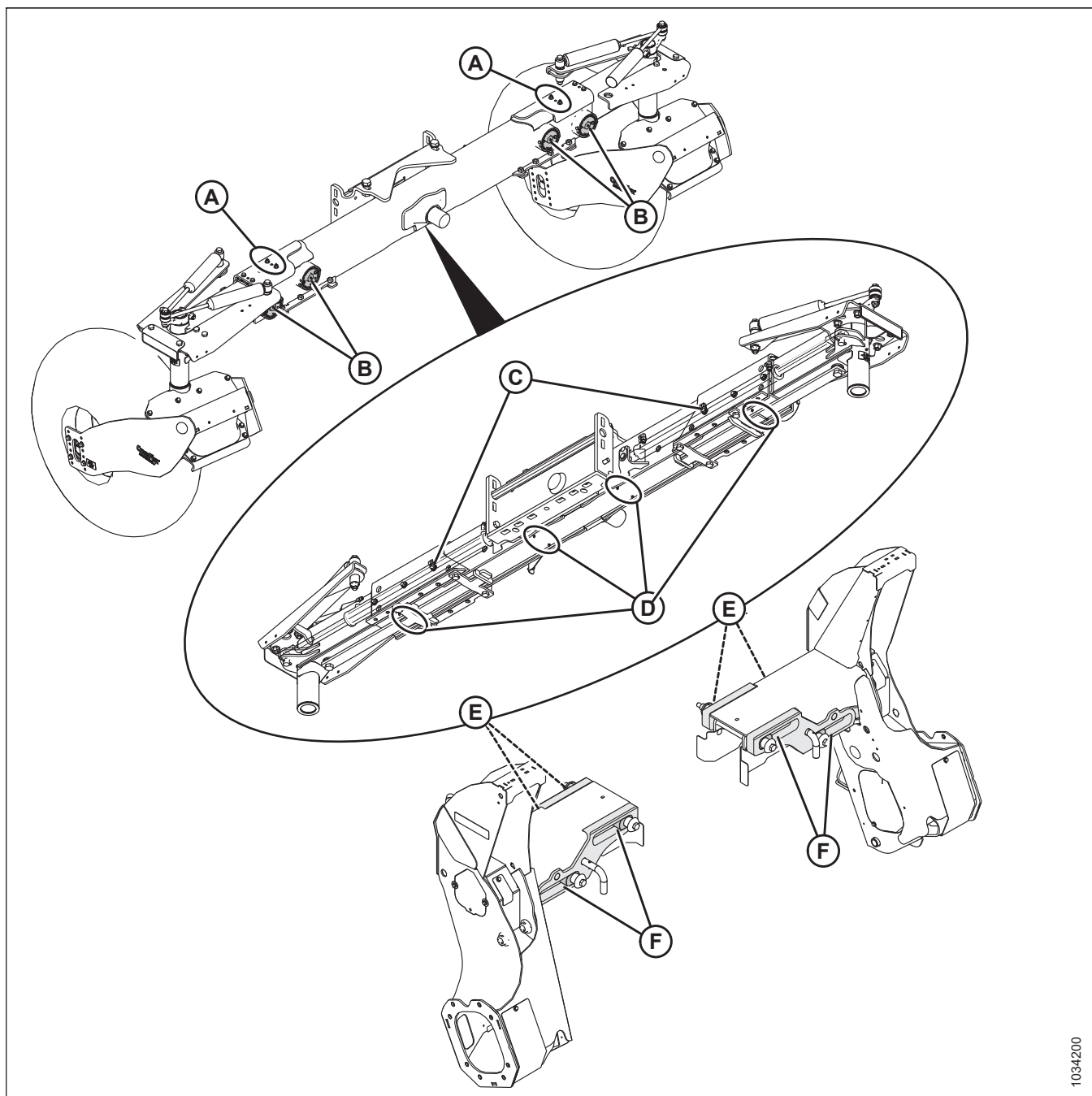
B - Caster Pivot (Both Sides)

C - Caster Wheel Hub (Both Sides)<sup>1</sup>

1. Do **NOT** overgrease. Use 1 pump of grease.

## ASSEMBLING WINDROWER

### Walking Beam and Drive Wheel Leg Extensions



**Figure 3.132: Wheel Extension Grease Points**

A - Walking Beam – Top Side (2 Places) (Both Sides)

C - Walking Beam – Outward Facing (2 Places)

E - Drive Wheel Legs – Inboard Bushings, Top Surfaces (2 Places) (Both Sides)

B - Walking Beam – Inward Facing (2 Places) (Both Sides)

D - Walking Beam – Underside (8 places)

F - Outboard Front Bushings, Bottom Surfaces – Drive Wheel Legs (2 Places) (Both Sides)

## 3.21 Connecting Batteries

Connecting the batteries provides electrical power to the windrower.

1. Move latch (A) towards the right cab-forward side of the windrower.
2. Grasp louver (B) and lift the hood to open it.

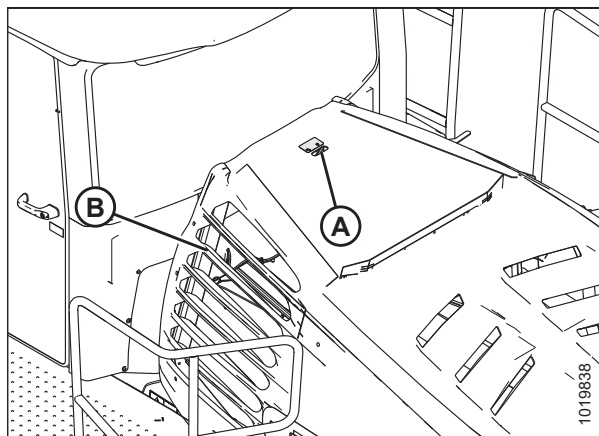


Figure 3.133: Engine Compartment Hood

3. Lift up on the cab-end of cover (A) to disengage it from retaining tab (B), and swing the cover away from the frame.
4. If you are installing a new battery, remove the plastic caps from the battery posts.

### IMPORTANT:

**Batteries are negative grounded.** Always connect the starter cable to the positive (+) terminal of the battery and the battery ground cable to the negative (–) terminal of the battery. Reversed polarity in the battery or alternator may result in permanent damage to the electrical system.

### NOTE:

Before connecting the electrical harness to the batteries, ensure that the positive terminal is positioned on the right side of the battery when the battery is installed on the battery support.

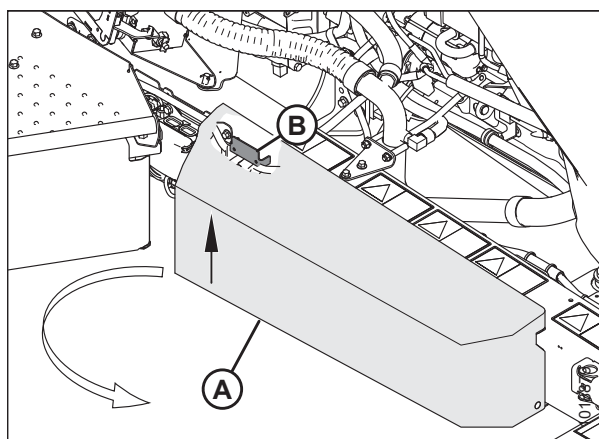


Figure 3.134: Battery Location

5. Attach the red positive (+) cable terminals to positive posts (B) on the batteries and tighten their clamps. Reposition the plastic covers onto the clamps.
6. Attach the black negative (–) cable terminals to negative posts (A) on the batteries and tighten their clamps. Reposition the plastic covers onto the clamps.

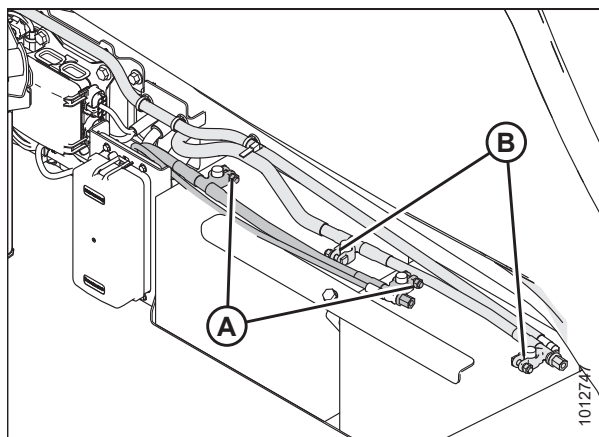


Figure 3.135: Battery Cables Installed

## ASSEMBLING WINDROWER

7. Swing cover (A) towards the windrower frame. Lift up on the cab-end of the cover until it is secured by retaining tab (B) on the frame.
8. Grasp the hood by louver (C) and lower it until the hood engages the latch.

**IMPORTANT:**

To ensure that the hood is latched, make sure that the latch lever is not tilted.

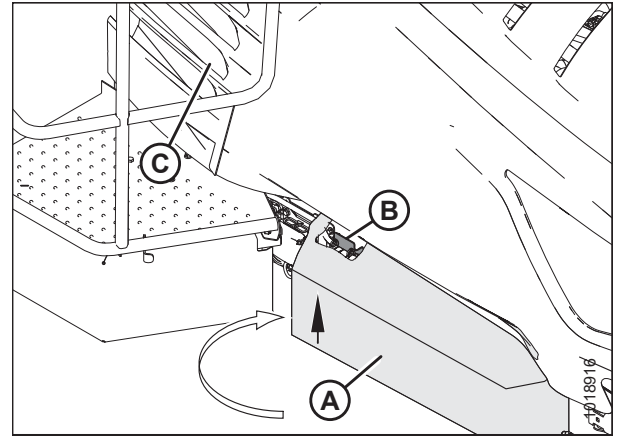


Figure 3.136: Battery Cover Secured

## 3.22 Removing Windrower from Stand

Remove the windrower from the lift stands before performing pre-delivery checks.

1. Position a jack under the jack point of each drive wheel leg and under the rear hitch.
2. Raise jacks to take the weight off the stands, and remove stands.
3. Lower windrower slowly to the ground, and remove jacks.

## Chapter 4: Performing Predelivery Checks

The windrower must be inspected before delivery to ensure proper functioning.

### IMPORTANT:

The machine should not require further adjustments after the assembly process is completed. However, to ensure that the machine is performing properly, conduct the following checks and complete the yellow predelivery checklist at the end of this book. Make adjustments only if absolutely necessary and in accordance with the instructions in this manual.

### 4.1 Completing Predelivery Checklist

The predelivery checklist contains all the features of the machine that require inspection.

Perform the final checks and adjustments listed on the following pages and on the *Predelivery Checklist, page 189* (yellow sheet attached to this instruction) to ensure that the machine is field-ready.

### IMPORTANT:

Ensure that the Operator or the Dealer retains the completed Predelivery Checklist.

#### 4.1.1 Recording Serial Numbers

Serial numbers identify the specific windrower and engine.

Record the windrower and engine serial numbers on the *Predelivery Checklist, page 189*, and confirm the serial number with the manifest or work order.

1. Move latch (A) toward the right cab-forward side of the windrower.
2. Grasp louver (B), and lift the hood to open it.

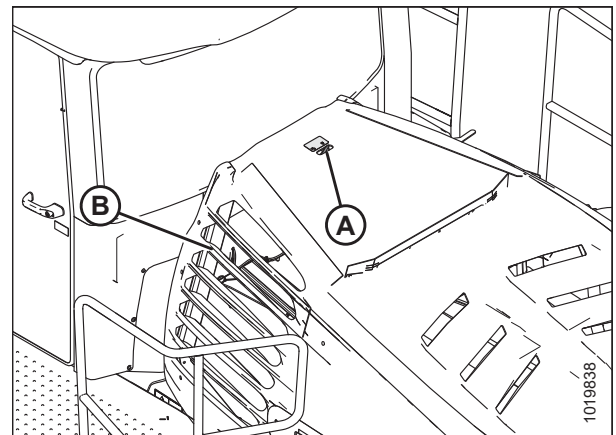
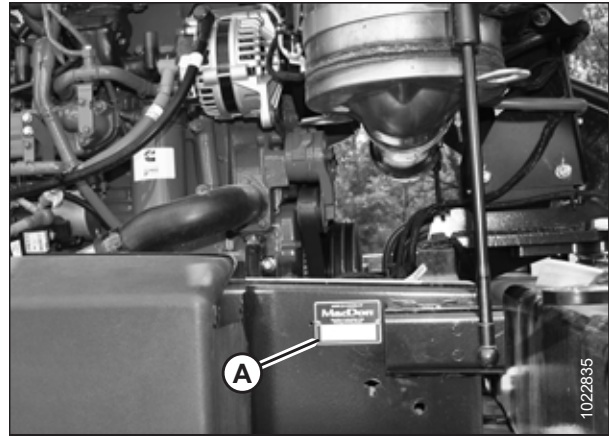


Figure 4.1: Hood

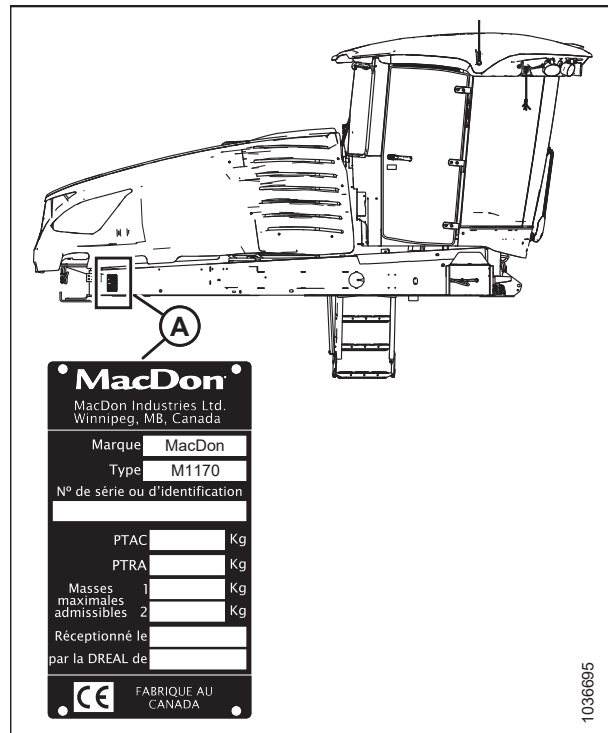
## PERFORMING PREDELIVERY CHECKS

3. **Windrowers sold in all countries except France:** Refer to the windrower serial number plate (A) on the **LEFT** side of the main frame near the walking beam as shown.



**Figure 4.2: Windrower Serial Number Location – Plate Used By All Countries Except France**

4. **Windrowers sold in France:** Refer to the windrower serial number plate (A) on the **RIGHT** side of the main frame near the walking beam as shown.

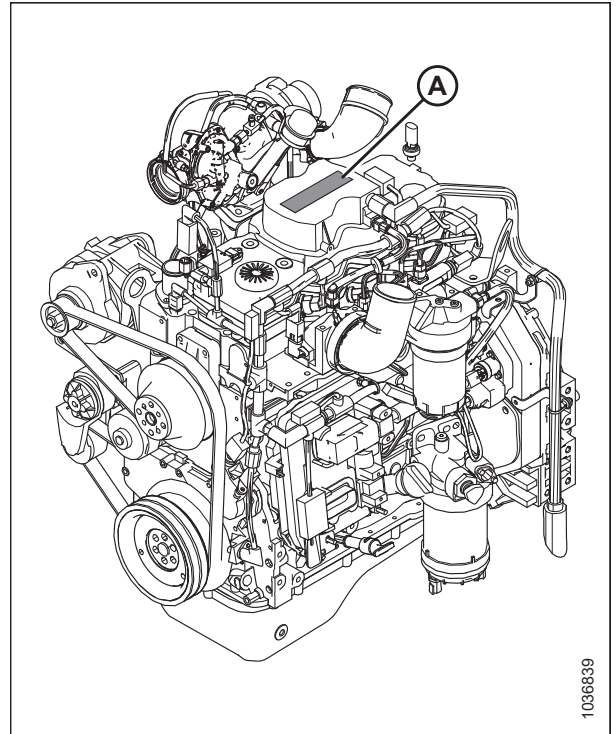


**Figure 4.3: Windrower Serial Number Location – Plate Used By France Only**



## PERFORMING PREDELIVERY CHECKS

5. Engine serial number plate (A) is located on top of the engine cylinder head cover as shown.



**Figure 4.4: Engine Serial Number Location**

### 4.1.2 Advising Customer where to Install Registration Plates

Before delivering the windrower to the customer, advise the customer where to mount the registration plate(s) (not supplied by MacDon). One registration plate must be mounted on the cab-end of the windrower. Depending on local regulations, an additional registration plate might have to be mounted onto the engine-end of the windrower.

- **Cab-end of the windrower:** Mount the registration plate onto bracket (A).
- **Engine-end of the windrower:** Center and mount the registration plate onto flat surface (B) of the hood.

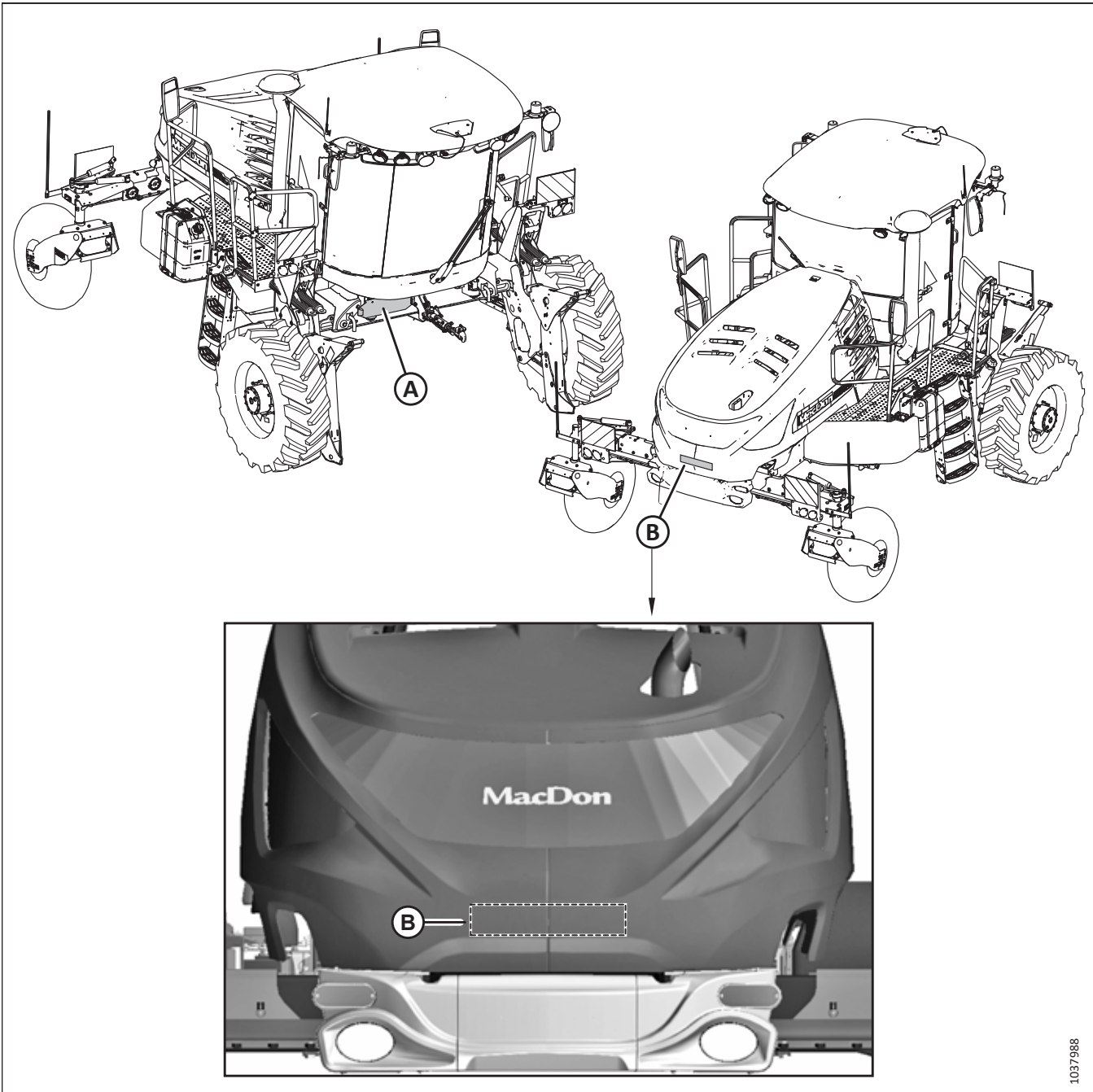


Figure 4.5: Registration Plate Installation Locations

### 4.1.3 Checking Engine Air Intake

The engine air intake must be clear and all its components properly secured for the engine to work correctly.

1. Check all engine air intake ducting (A) for looseness. Tighten the hose clamps as required.
2. Check that end cap (B) is secure.

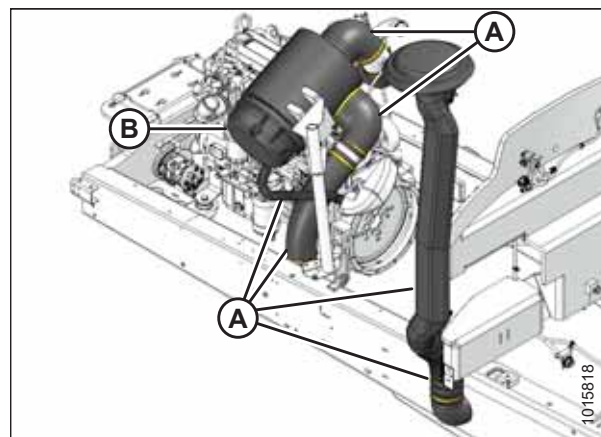


Figure 4.6: Engine Air Intake

3. Check three constant torque hose clamps (A) and spring clamp (B) on the turbocharger intake duct. Clamp (B) is properly tightened when screw tip (C) extends beyond the housing and Belleville washers (D) are almost flat.

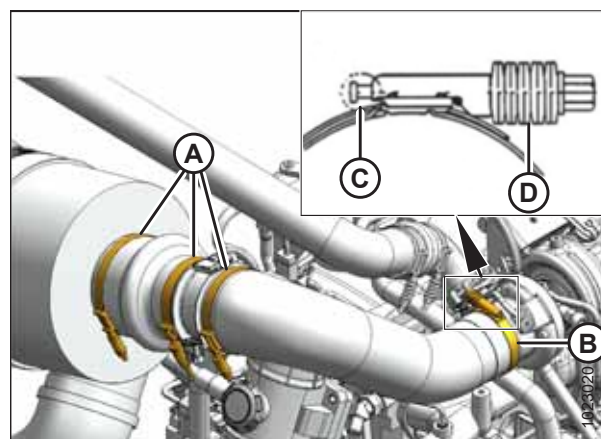


Figure 4.7: Constant Torque Clamps

### 4.1.4 Checking and Adding Hydraulic Oil

The hydraulic system will not work correctly if the hydraulic oil level is too low or too high.



#### **WARNING**

Avoid high-pressure fluids. Escaping fluid can penetrate the skin causing serious injury.

## PERFORMING PREDELIVERY CHECKS

1. Locate sight glass (A) on the right side of the hydraulic fluid tank.

**NOTE:**

The sight glass allows the operator to visually inspect the oil level and its quality. The sight glass can be seen with the hood open or closed.

2. Ensure that the hydraulic oil level is between the low and full indicator marks on the sight glass.

**IMPORTANT:**

If you do not see any oil in the sight glass, then the oil level is below the ADD mark on the dipstick. This problem should be addressed immediately.

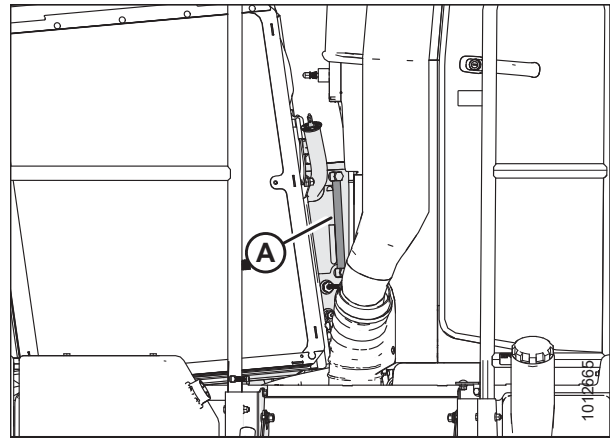


Figure 4.8: Hydraulic Oil Sight Glass

3. If the oil level is too low, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#) for oil specifications and add oil as follows:

**IMPORTANT:**

Clean the area around the filler plug to prevent debris from entering the tank.

- a. Turn plug handle (B) counterclockwise until it is loose and remove the plug by pulling it straight out.
- b. Open breather cap (A).

**NOTE:**

This will allow the hydraulic system to vent, speeding up the filling process.

- c. Add hydraulic oil until the level in the tank is at the full indicator mark.
- d. Reinstall breather cap (A) and filler plug (B) and turn the filler plug handle clockwise until it is secure.

**NOTE:**

After running up a header, check the oil level again.

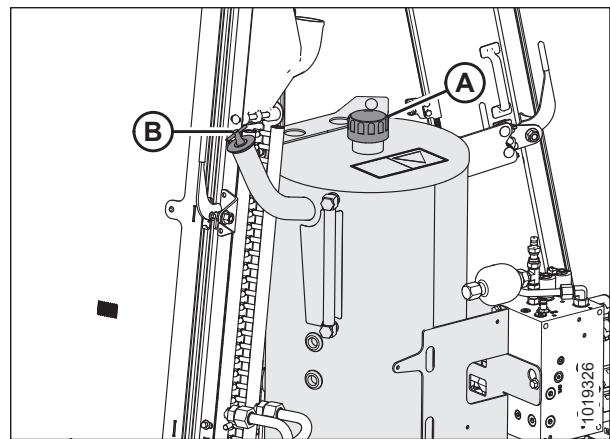


Figure 4.9: Hydraulic Oil Filler Neck and Breather Tube

### 4.1.5 Checking Fuel Separator

The fuel separator removes water and sediment from the fuel to prevent damage to the engine. It will need to be inspected to ensure that it is clean.

1. Place a container under filter drain valve (A).
2. Turn drain valve (A) by hand 1 1/2 to 2 turns counterclockwise until fuel begins draining.
3. Drain the filter sump of water and sediment until clear fuel is visible. Clean the sump as needed.
4. Turn drain valve (A) by hand 1 1/2 to 2 turns clockwise until it is tight.
5. Dispose of the fuel in a safe manner.

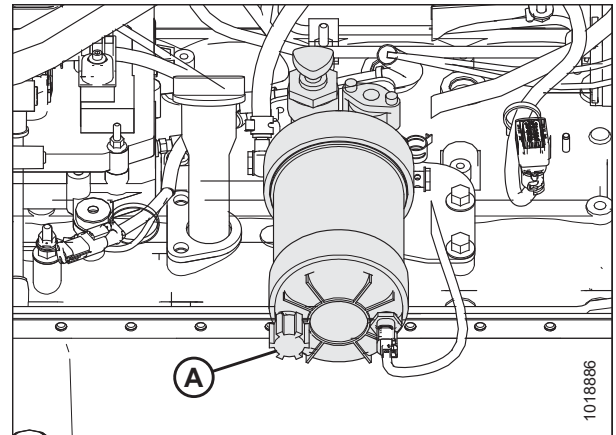


Figure 4.10: Fuel Filter

### 4.1.6 Checking Engine Coolant Level

Coolant is cycled through the engine to help reduce internal heat. The coolant must be at the appropriate level for the cooling system to work correctly.

1. Locate coolant recovery tank (A).
2. Visually inspect the coolant level. Ensure that the coolant level is at MAX COLD line (B). If the coolant level is too low, complete Step 3, [page 116](#).

**NOTE:**

For fluid specifications, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).

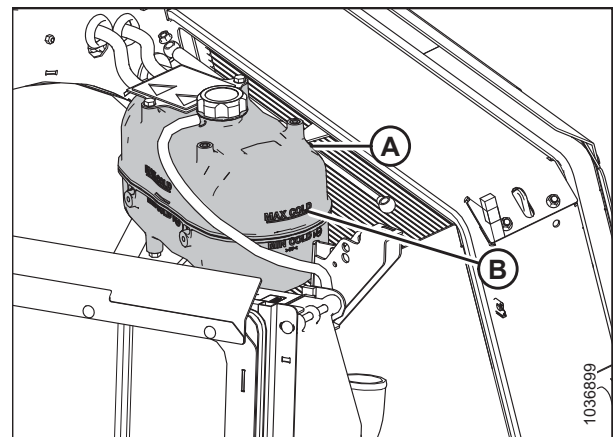


Figure 4.11: Coolant Recovery Tank

## PERFORMING PREDELIVERY CHECKS

### 3. To add coolant:

- Remove pressurized cap (A) from the coolant recovery tank.
- Add coolant at a rate not exceeding 11 L/min (3 gpm) until the recovery tank is half-full and the coolant level is at MAX COLD line (B)
- Replace cap (A).

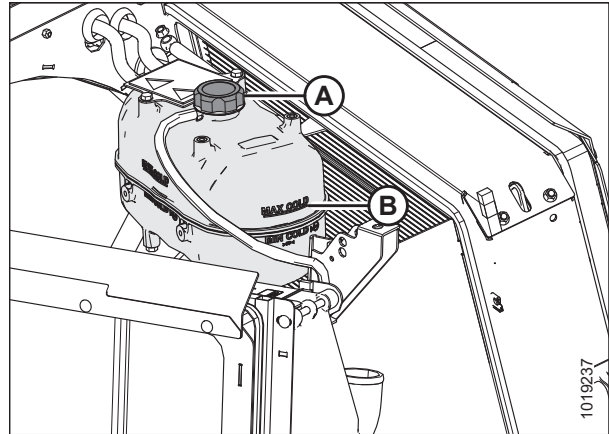


Figure 4.12: Coolant Recovery Tank Cap and MAX COLD Fill Line

### 4.1.7 Checking and Adding Engine Oil

Check the engine oil level and watch for any signs of leakage.

#### NOTE:

The engine oil level can be checked without opening the hood.

- Locate the engine oil dipstick on the right side of the windrower. Remove dipstick (A) by turning it counterclockwise to unlock it.
- Wipe the dipstick clean and reinsert it into the engine.

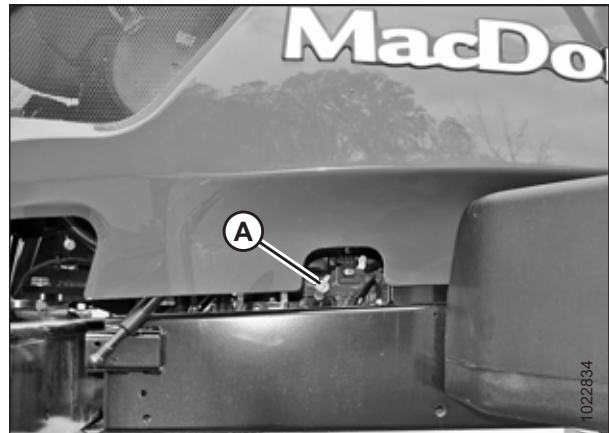


Figure 4.13: Engine Oil Dipstick Location

- Remove the dipstick again and check the oil level. The oil level should be between the LOW (L) and HIGH (H) marks on the dipstick. If the oil level is below the LOW mark, you will need to add oil.

#### NOTE:

Adding 1.9 liters (2 U.S. quarts) of engine oil will raise the level from LOW to HIGH.

- Replace the dipstick and turn it clockwise to lock it.

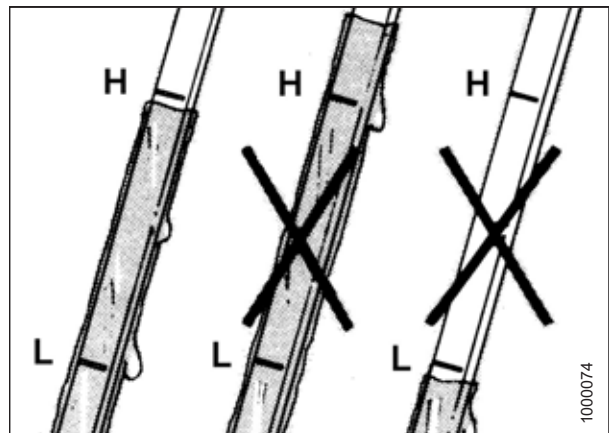


Figure 4.14: Engine Oil Level on Dipstick

## PERFORMING PREDELIVERY CHECKS

If the oil level is too low, follow these steps to add oil:

5. Move latch (A) toward the right cab-forward side of the windrower.
6. Grasp louver (B), and lift the hood to open it.

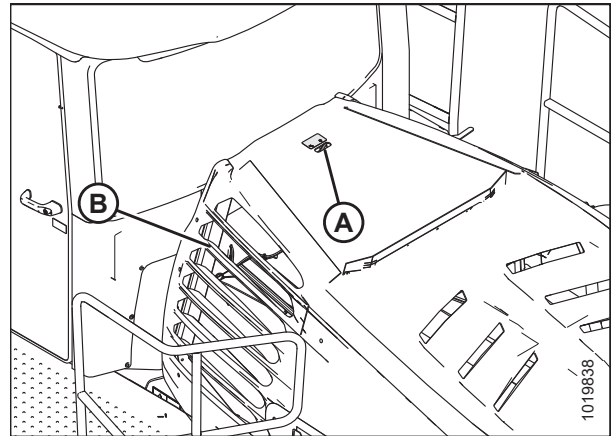


Figure 4.15: Hood

7. Clean the area around filler cap (A) and remove it by turning the cap counterclockwise.
8. Carefully add oil using a funnel to achieve the desired level. For oil specifications, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).

### IMPORTANT:

Do **NOT** overfill the reservoir with engine oil. Running the engine with excess oil in the reservoir can result in equipment damage.

9. Install oil filler cap (A) and turn it clockwise until it is snug.

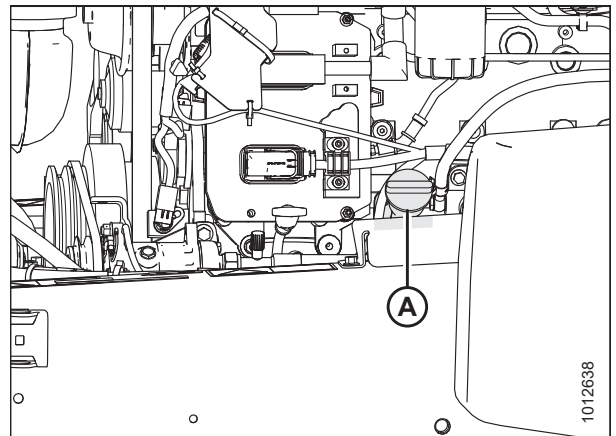


Figure 4.16: Oil Filler Cap

### 4.1.8 Checking Engine Gearbox Lubricant Level and Adding Lubricant

Ensure that the gearbox lubricant level is correct in order to maximize the service life of its components.

1. Shut down the engine, and remove the key from the ignition.

### NOTE:

If the engine is hot, wait 10 minutes before checking the gearbox lubricant level to allow the lubricant to cool and settle in the gearbox's sump.

2. Open the hood. Refer to the operator's manual for instructions.



## PERFORMING PREDELIVERY CHECKS

3. Locate gearbox oil level check plug (A) under the windrower.
4. Remove oil level check plug (A). The lubricant should be visible through the hole. Some lubricant may leak from the level check port.

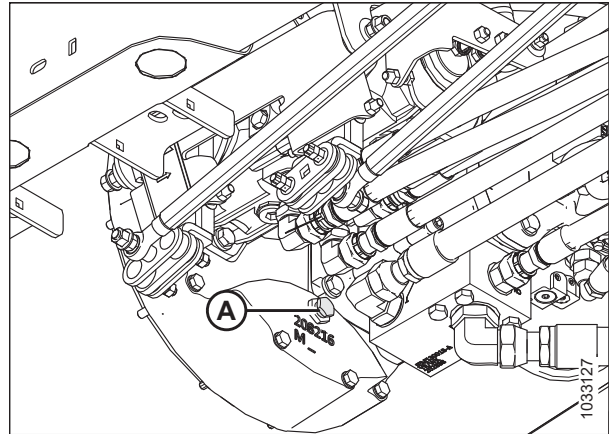


Figure 4.17: Gearbox Lubricant Check Plug

5. If lubricant is needed, remove breather cap (A) and add lubricant until it runs out of the level check port.

**NOTE:**

Refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#) for information on the type and quantity of gearbox lubricant needed.

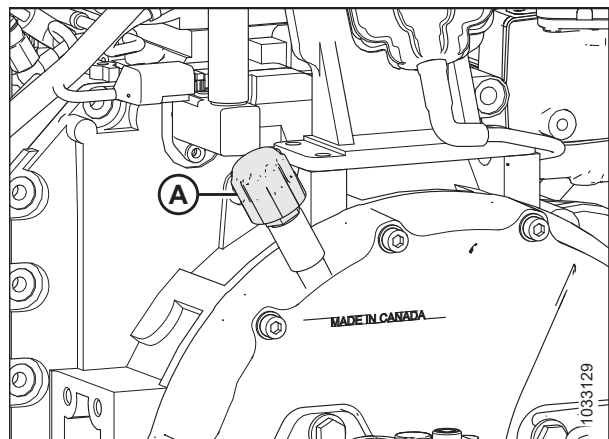


Figure 4.18: Gearbox Lubricant Filler

6. Replace oil level check plug (A) and the breather cap and tighten both.

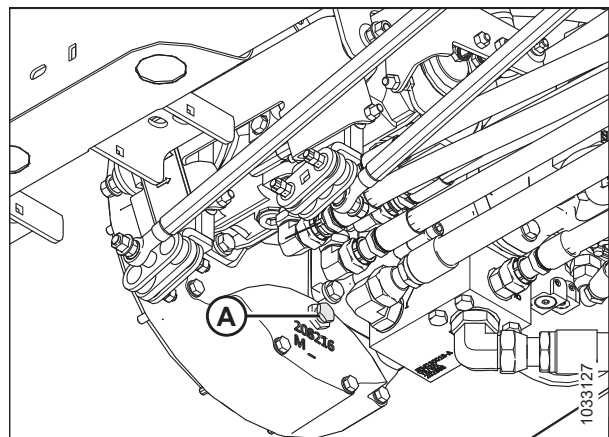


Figure 4.19: Gearbox Lubricant Check Plug



### 4.1.9 Checking Air Conditioning Compressor Belt

The windrower's air conditioner compressor is belt-driven. The belt must be tensioned correctly for the air conditioning system to function properly.

1. Grasp the hood by louver (A) and lower until hood engages latch.

**NOTE:**

Check that latch lever is not tilted to ensure the hood is latched.

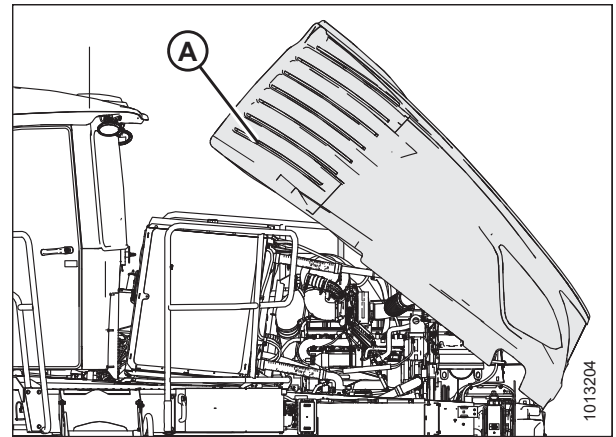


Figure 4.20: Engine Compartment

### 4.1.10 Starting Engine

You can start the engine with the operator's seat in the cab-forward or the engine-forward position.



**DANGER**

- Only start the engine in a well-ventilated space.
- Ensure that there are no bystanders present when starting the machine.
- This machine has safety devices which allow the engine to start only when the ground speed lever (GSL) is in PARK, the steering wheel is locked in the PARK position, and the HEADER ENGAGE switch is in the OFF position. Under NO circumstances are these devices to be deliberately rewired or adjusted so that the engine can be started when the GSL is out of the NEUTRAL position.
- Do NOT start the engine by shorting across the starter or starter relay terminals. If the normal starting circuitry is bypassed, the machine can start with the drive engaged and potentially start moving.
- Start the engine only from the operator's seat with the controls in PARK. NEVER start the engine while standing on the ground. NEVER try to start the engine with someone under or near the machine.

**IMPORTANT:**

Do NOT tow the machine to start the engine. Damage to the hydrostatic drives will result.

## PERFORMING PREDELIVERY CHECKS

### NOTE:

When the windrower console receives a wake-up signal, the console awakens from sleep mode and closes the battery disconnect relay. The Harvest Performance Tracker (HPT) goes into a boot-up sequence that takes approximately 40 seconds. The following items trigger a wake-up signal for the console:

- Key switch ignition or accessory positions
- Cab door switch
- Horn button
- Hazards button
- Field lights button
- Clearance lights button
- Road lights button
- High beam button

1. Before starting the engine, ensure that engine exhaust pipe (A) is not covered or obstructed.

### NOTE:

Before taking the GSL out of PARK, let the hydraulic oil warm up to 32°C (90°F). You can view the hydraulic oil temperature on Run Screen 4 on the Harvest Performance Tracker (HPT) display.



Figure 4.21: Engine Exhaust

2. Ensure that cab-forward or engine-forward directional lock (A) is engaged at the base of the steering column.

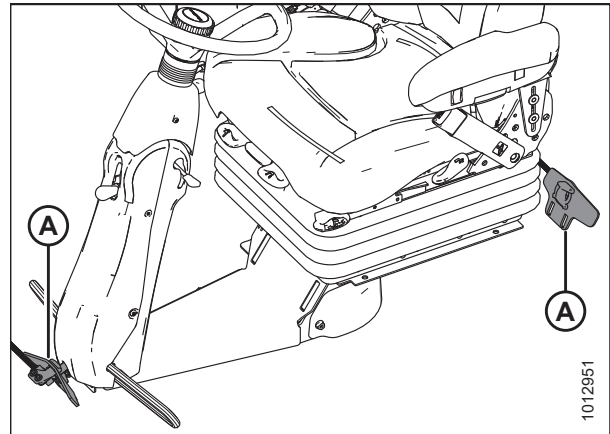


Figure 4.22: Direction Locks

## PERFORMING PREDELIVERY CHECKS

3. Move GSL (A) into PARK (C).
4. Turn the steering wheel until it locks. It may be possible to move the steering wheel slightly in the locked position.

### IMPORTANT:

Do **NOT** attempt to force the wheel out of the locked position or damage to the steering system may occur.

5. Fasten the seat belt.
6. Push HEADER ENGAGE switch (B) to ensure it is in the OFF position.

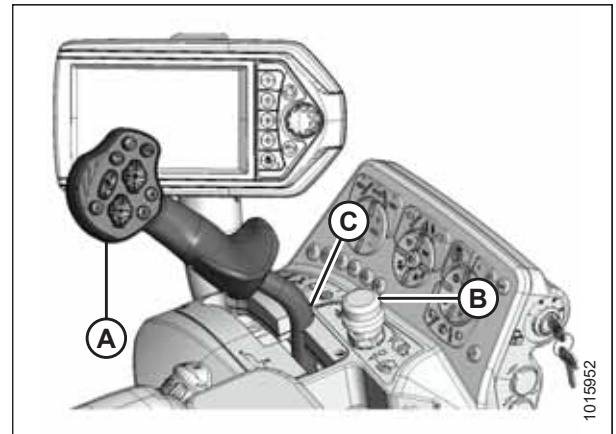


Figure 4.23: Operator Controls

7. Press HORN button (E) three times prior to starting the engine.
8. Turn IGNITION switch (A) to the ON position; HPT display (B) will light up. If the HPT is still booting up, wait for WAIT TO START (WTS) symbol (C) to disappear before trying to start the engine.
9. Ensure that red PARK symbol light (D) is ON and that there are no error messages on the screen.

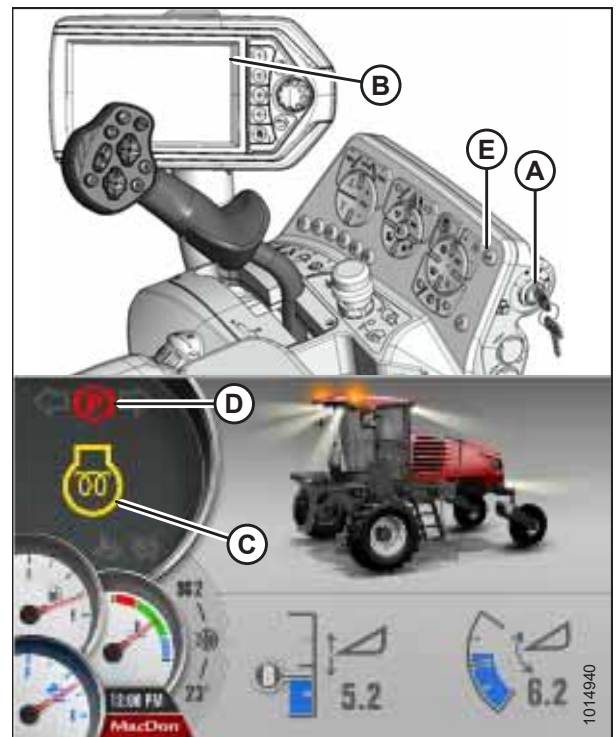


Figure 4.24: Console and HPT Run Screen

## PERFORMING PREDELIVERY CHECKS

10. Turn the IGNITION switch to crank position (A).

### NOTE:

When the engine starts and the header is not engaged, the HPT displays header disengaged page (B).

### IMPORTANT:

- Do **NOT** operate the starter for longer than 15 seconds at a time.
- If the engine does not start, wait at least 2 minutes before trying again.
- If you crank the engine for more than 30 seconds within a 2-minute period, the engine will lock the starter circuit to prevent overheating, and a flashing WTS symbol will appear on the display. Wait for the WTS symbol to stop flashing before attempting to crank the engine again.
- If the engine still does not start, refer to the windrower operator's manual.

### NOTE:

If you attempt to start the engine when the ambient temperature is below 5°C (40°F), the engine will cycle through a period during which it will sound as though it is struggling to stay running. This is the engine's warm-up mode. The throttle will be unresponsive while the engine is in warm-up mode. Warm-up mode lasts between 30 seconds and 3 minutes depending on the temperature. The throttle will become active after the engine has stabilized and is idling normally. Do **NOT** operate the engine above 1500 rpm until the HPT engine temperature gauge is above blue range (A).

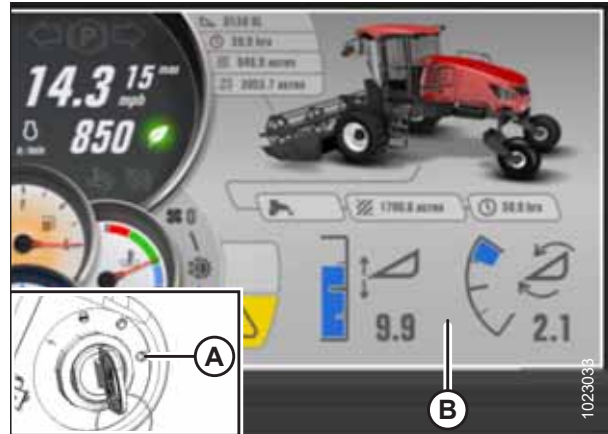


Figure 4.25: HPT Header Disengaged Screen

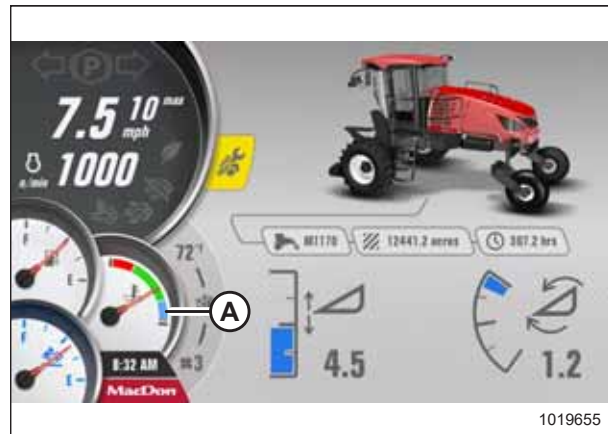


Figure 4.26: HPT No Header Screen

### 4.1.11 Bleeding Brakes – Windrowers Sold In Germany Only

If the windrower is equipped with the secondary brakes package, you must bleed the brakes once before using them for the first time.

### NOTE:

This procedure requires two people. Have one person operate the Harvest Performance Tracker (HPT), and another person at the drive wheels.

## PERFORMING PREDELIVERY CHECKS

1. Place the windrower in **ENGINE-FORWARD** mode. For instructions, refer to the windrower operator's manual.
2. Using a forklift, lift the cab end of the windrower approximately 130 cm (51 in.) (B) off of the ground, or high enough so that left cab-forward drive wheel assembly (A) can be removed. Place stand (C) under the windrower frame. Repeat this step for the other drive wheel.

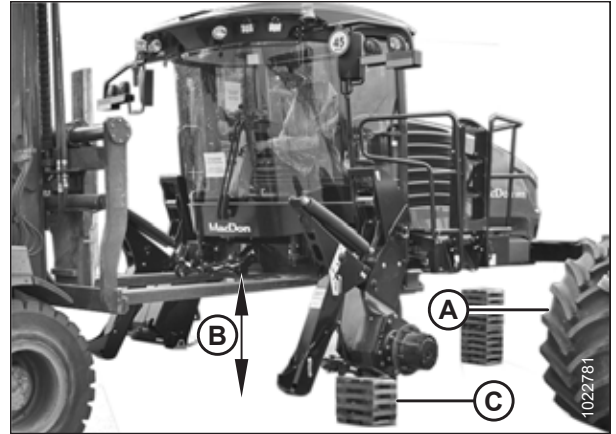


Figure 4.27: Supporting Windrower

3. Remove two bolts (A) at the center of the drive wheel.
4. Remove cap (B) and flip it over so that the convex side faces in. The cap presses a pin that disengages the gearbox.
5. Reinstall bolts (A) to secure cap (B).
6. Repeat Step 3, page 123 to Step 5, page 123 on the other drive wheel.
7. Start the engine at low idle (1110 rpm).
8. Leave the ground speed lever (GSL) in NEUTRAL.
9. Do **NOT** engage the brakes.

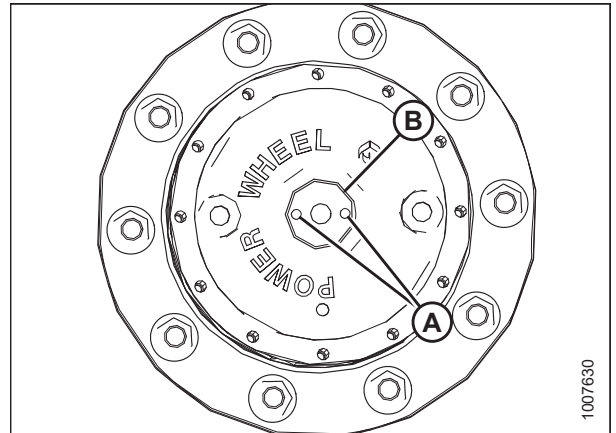


Figure 4.28: Final Drives – 10 Bolt

10. Make sure secondary brake icon (A) appears on the HPT. The icon should be grey, which means the secondary brake system is disabled.

### IMPORTANT:

If icon (A) does **NOT** appear at all, then the windrower cannot detect the secondary brake system. Contact MacDon for assistance.



Figure 4.29: HPT

## PERFORMING PREDELIVERY CHECKS

11. Each drive wheel has two brake calipers (A), for a total of four brake calipers on the windrower. Locate bleed screw (B) on each caliper.

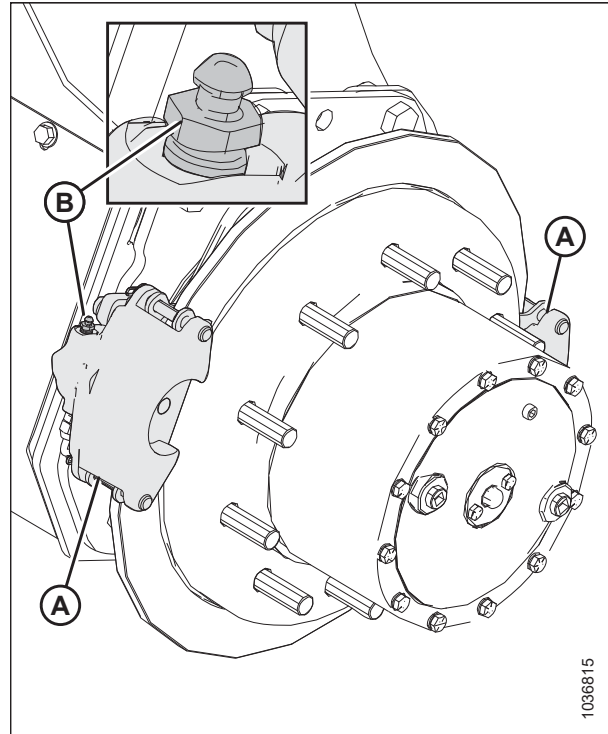


Figure 4.30: Bleed Screw

12. Attach a drain hose (A) (preferably transparent) onto the bleed screw nipple. Allow the hose to drain into a catch pan (B).

**NOTE:**

Use a drain hose that has an inner diameter of 6 mm (1/4 in.) and is approximately 1200 mm (47 1/4 in.) long.

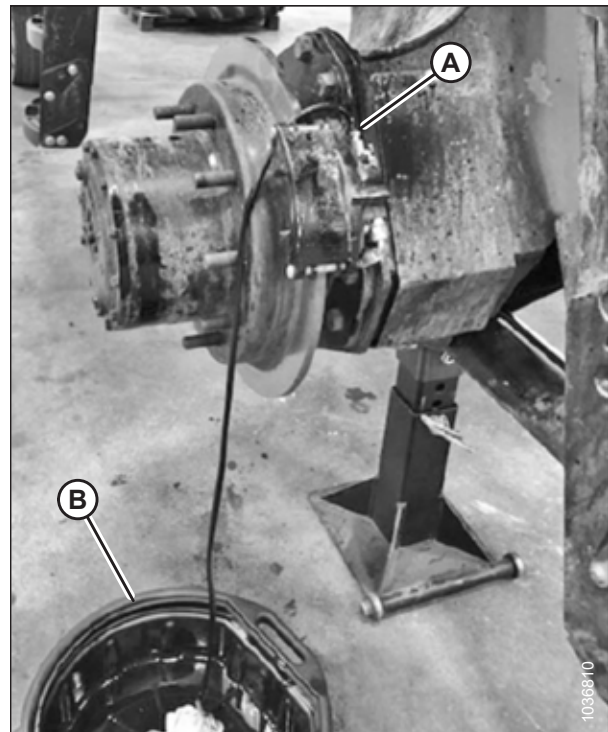


Figure 4.31: Drain Hose Attached to Caliper



## PERFORMING PREDELIVERY CHECKS

### IMPORTANT:

Do **NOT** press "C" button (A) or pull the GSL out of NEUTRAL during brake bleed process.

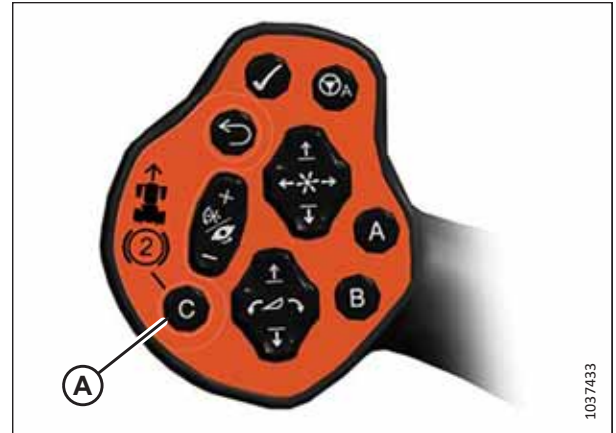


Figure 4.32: GSL

13. On the HPT, press soft key 5 (A) to open the main menu or press SHIFT and SELECT on the GSL.
14. Use HPT scroll knob (B) or the GSL scroll wheel (not shown) to place red cursor (not shown) over DIAGNOSTICS (C). Press HPT scroll knob (B) or the GSL SELECT button (not shown).

### NOTE:

Using the scroll knob will activate titles that explain each selection.

15. Select INPUTS/OUTPUTS (D) from the DIAGNOSTICS submenu and press HPT scroll knob (B) or the GSL SELECT button (not shown).
16. The INPUT/OUTPUT LIST page appears. Select SECONDARY BRAKE (A) and press the HPT scroll knob or the GSL SELECT button.

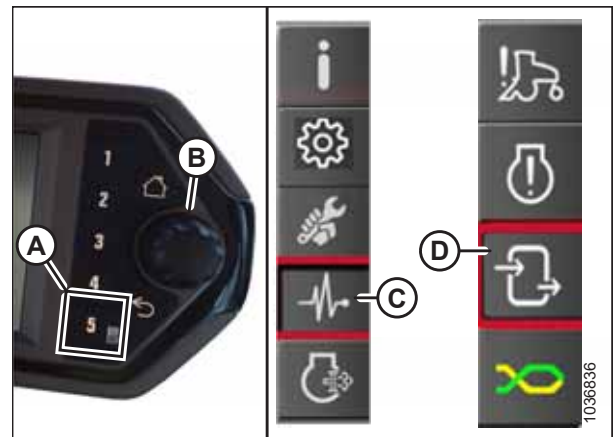


Figure 4.33: Opening the Main Menu



Figure 4.34: INPUT/OUTPUT List Page

## PERFORMING PREDELIVERY CHECKS

17. Refer to BRAKE PRESSURE SENSOR STATUS in list (A). The pressure should read 10–20 psi while the engine is idling.

A

## Input/Output List

MacDon

Desc	Status	Module	Type	Conn	Pos
GSL1 sensor status	Low Alarm	Secondary Brake	V-In	P510	7
GSL2 sensor status	Low Error	Secondary Brake	V-In	P510	8
Brake pressure sensor status	High Error 1000 psi	Secondary Brake	V-In	P232	9
Brake installed	OK	Secondary Brake	J1939 Message	P232	01A1
Brake enabled	OK	Secondary Brake	J1939 Message	P232	01A1
GSL control status	GSL sensor Broken cable	Secondary Brake	J1939 Message	P510	01A1
Brake output	Open Load 85 %	Secondary Brake	PWM-Out	P230	24, 25, 26

Systems - Secondary Brake

1036819

Figure 4.35: INPUT/OUTPUT List – SECONDARY BRAKE Page

18. Press GSL buttons “A” (A) and SHIFT (B) **SIMULTANEOUSLY** to activate the brake bleed pressure. The pressure will increase to 40–60 psi (brake bleed pressure).

### NOTE:

Once you activate the brake bleed pressure, the pressure will increase to, and remain at, 40–60 psi until you deactivate the pressure. You can deactivate the pressure by one of the following methods:

- Pressing GSL buttons “A” (A) and SHIFT (B) simultaneously
- Shutting the engine off

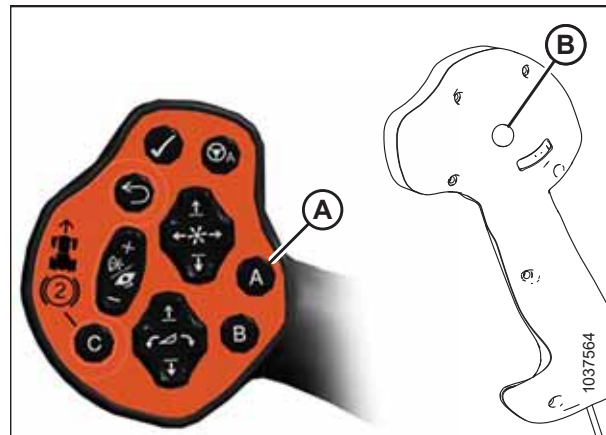


Figure 4.36: GSL



## PERFORMING PREDELIVERY CHECKS

19. With the bleed pressure activated (40-60 psi), loosen bleed screw (A) **SLOWLY** by approximately 1/4 turn, until oil and air start escaping through the drain tube and into catch pan.
20. Once the air is dispersed, and oil flows smoothly, tighten bleed screw (A) until finger-tight, and then tighten the screw an additional 1/4 turn.

### IMPORTANT:

Do **NOT** use an impact tool to tighten the bleed screws. Over-tightening might damage the bleed screw.

21. While the bleed pressure is still active (40–60 psi), install the drain hose onto the bleed screw of the next caliper.
22. Repeat Step 19, page 127 to Step 21, page 127 for the remaining calipers.

### NOTE:

There are four calipers in total (two calipers per drive wheel).

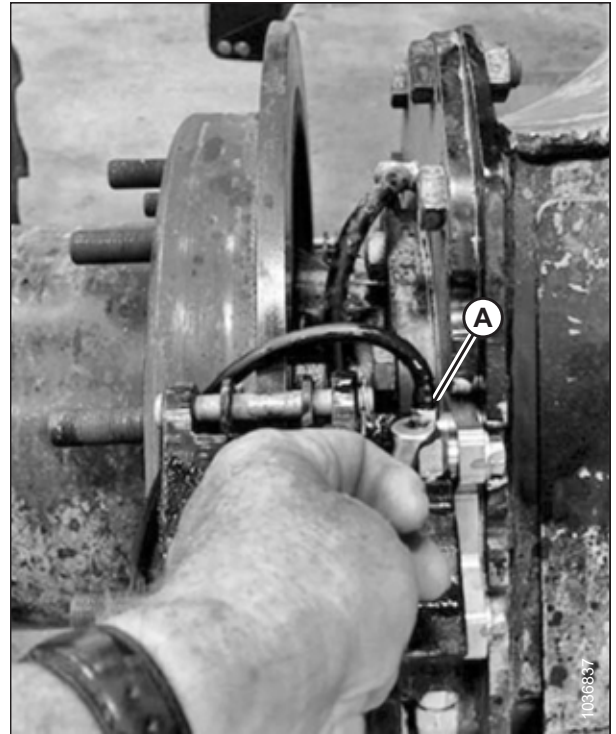


Figure 4.37: Drain Hose Attached to Bleed Screw

23. Once all four calipers are bled, press GSL buttons “A” (A) and SHIFT (B) **SIMULTANEOUSLY** to deactivate the brake bleed pressure.
24. Shut down the engine, and remove the key from the ignition.

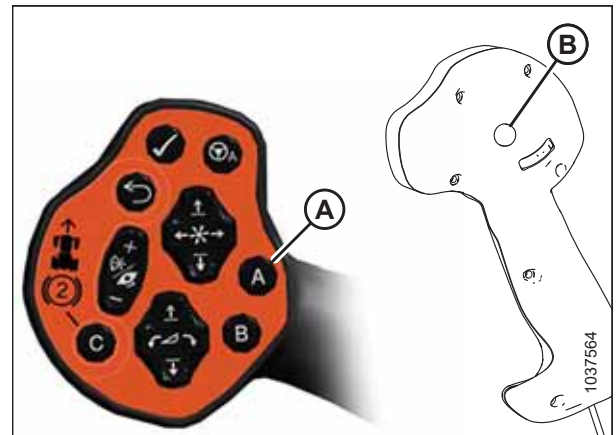


Figure 4.38: GSL

## PERFORMING PREDELIVERY CHECKS

25. Confirm all four bleed screws (A) are tightened properly (finger-tight, plus an additional 1/4 turn).

**IMPORTANT:**

Do **NOT** use an impact tool to tighten the bleed screws. Over-tightening might damage the bleed screw.

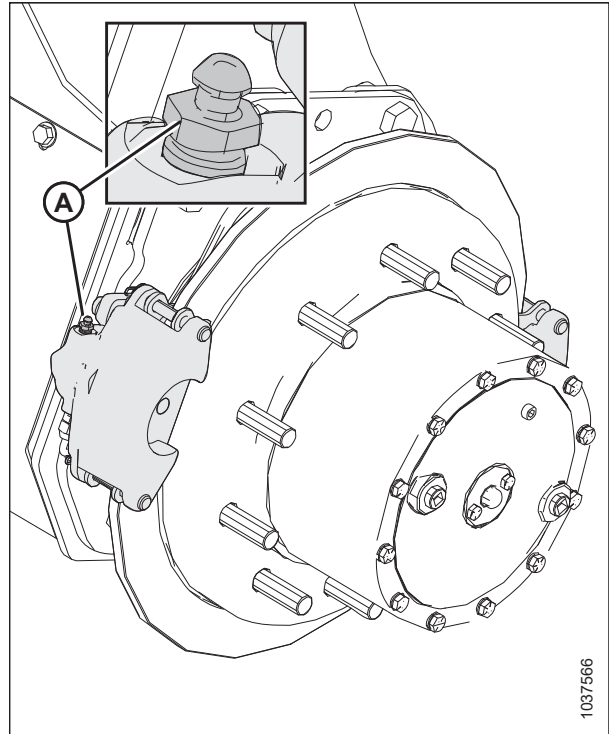


Figure 4.39: Bleed Screw

26. Remove two bolts (A) and reverse cap (B) to engage the final drives. Be sure the pin at the center of the wheel pops out to engage the drive. Reinstall bolts (A).

**NOTE:**

Engaging the final drives may require rocking the wheels slightly.

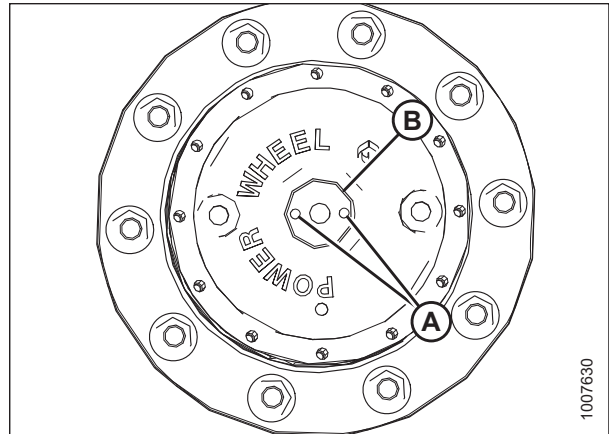


Figure 4.40: Final Drives – 10 Bolt

## PERFORMING PREDELIVERY CHECKS

### Testing the secondary brake system

27. Start the engine and increase the throttle to 1800 rpm (B).
28. Make sure GSL is in PARK. Confirm park brake light (A) is illuminated on the HPT.



Figure 4.41: HPT

29. Press "C" button (A) on the GSL to enable the secondary brake system.

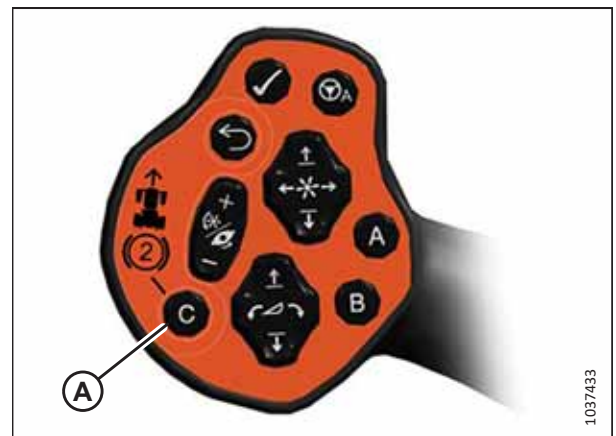


Figure 4.42: GSL

30. Once the secondary brake engages:
  - Engine speed should drop to 1500 rpm (A)
  - Secondary brakes light illuminates green (B)
  - Red parking light stays illuminated (C)
31. Pull the GSL out of PARK and try to stroke the GSL into FORWARD.
  - You should be able to hear the engine working but the drive wheels should **NOT** be able to move.
32. Hold the GSL in FORWARD for **NO MORE** than 2 seconds.
33. Place the GSL in PARK.

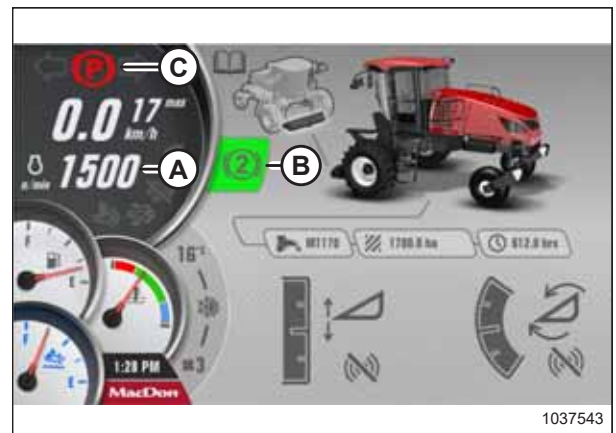


Figure 4.43: HPT

## PERFORMING PREDELIVERY CHECKS

34. Press "C" button (A) on the GSL to disable the secondary brake system.
35. The engine speed should increase to 1800 rpm.
36. Lower the engine speed to 1100 rpm.
37. Shut down the engine, and remove the key from the ignition.
38. Inspect the brake system for leaks.
  - Repair the system as required. Once the system is repaired, re-test the system (follow Step 27, page 129 to Step 37, page 130).

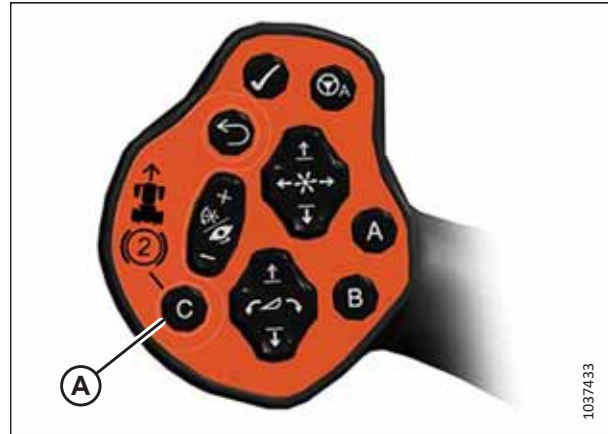


Figure 4.44: GSL

### Reinstalling the drive wheels

39. Clean the mounting surface on the wheel drive and the rim.
40. Position lifting device (A) under the tire and raise it slightly.
41. Position the wheel against the wheel drive hub so that air valve (B) is on the outside while tread (C) points forward.

#### NOTE:

For wheels equipped with turf tires (those with a diamond tread pattern), be sure that the arrow on the sidewall points cab-forward.

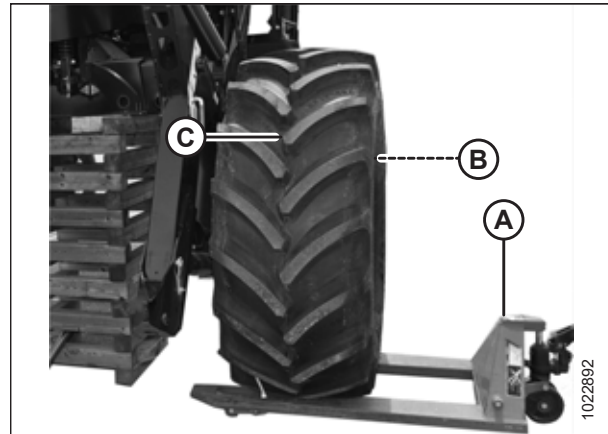


Figure 4.45: Drive Wheel

42. Align the wheel rim with the studs on the hub. Push the wheel onto the hub.
43. Install and hand-tighten wheel nuts (A).

#### IMPORTANT:

To avoid damage to the wheel rims and studs, do **NOT** use an impact wrench to tighten the nuts. The stud threads must be clean and dry. Do **NOT** apply lubricant or anti-seize compound to the stud threads. Do **NOT** overtighten the wheel nuts.

44. Torque the drive wheel nuts to 510 Nm (375 lbf-ft) using the tightening sequence shown.

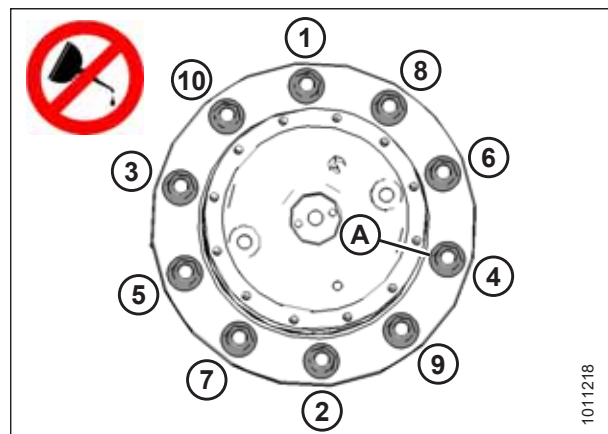


Figure 4.46: Tightening Sequence – Ten-Bolt Wheel

### 4.1.12 Checking and Adding Wheel Drive Lubricant

Ensure that the wheel drive lubricant level is correct to maximize the service life of the components.

#### DANGER

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

#### CAUTION

Park on a level surface with the ground speed lever (GSL) in the PARK position and the steering wheel in the locked (centered) position. Wait for the Harvest Performance Tracker (HPT) to beep and display a red P symbol to confirm that the parking brake is engaged.

1. Park the windrower on level ground.
2. Position the windrower so that plugs (A) and (B) are horizontally aligned with center (C) of the hub.
3. Shut down the engine, and remove the key from the ignition.
4. Remove plug (A) or (B). The lubricant should be visible through the port. Some fluid may spill from the port.
5. If necessary, add lubricant until lubricant runs out from open port (A) or (B). For lubricant specifications, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).

#### IMPORTANT:

The lubricant used for the first wheel drive lubricant change differs from the type of lubricant used at the factory. For lubricant specifications, refer to [6.1 Lubricants, Fluids, and System Capacities, page 175](#).

6. Reinstall the plug and tighten it to 24 Nm (18 lbf·ft).

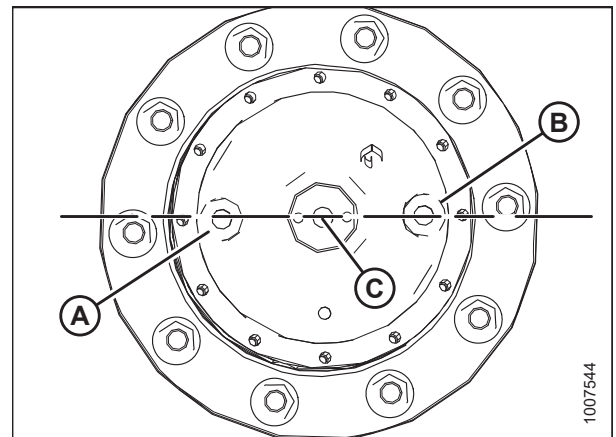


Figure 4.47: Drive Wheel Hub

### 4.1.13 Checking Traction Drive

The drive wheels should spin either at the same speed or at different speeds depending on how you steer the windrower.

#### DANGER

Ensure that all bystanders have cleared the area.

## PERFORMING PREDELIVERY CHECKS

1. Move ground speed lever (GSL) (A) out of PARK and slowly move the GSL forwards. Ensure wheels are rotating in the forward direction and at the same speed.
2. Turn the steering wheel and observe the motion of the drive wheels. Ensure the wheels rotate at different speeds with the slower rotating wheel on the same side of machine that the steering wheel is turned toward.
3. Turn the steering wheel in the opposite direction and ensure the slower rotating wheel is on the same side of the machine that the steering wheel is turned toward.
4. Move the GSL backwards into reverse. Ensure the wheels are rotating in the reverse direction and at the same speed.
5. Move the GSL forward into PARK, and shut down the engine.



Figure 4.48: Operator Console

### 4.1.14 Checking Tire Pressure

The tires must be at the correct operating pressure. Check the pressure of the windrower tires using a tire pressure gauge.

**Caster Wheel Tires:** Inflate all caster wheel tires (B) to 110 kPa (16 psi).

**Drive Wheel Tires:** The maximum inflation pressure for the drive tires (A) is 241 kPa (35 psi).

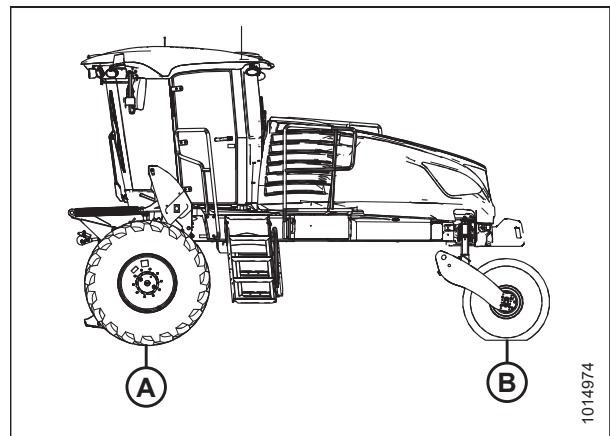


Figure 4.49: Windrower Tires



## 4.2 Performing Operational Checks

After performing all pre-start checks and starting the engine, the operating features of the windrower should be inspected.

1. Perform the final checks and adjustments listed on the following pages and the *Predelivery Checklist, page 189* (the yellow sheet attached to this instruction) to ensure that the machine is field-ready.
2. Ensure that the Operator or the Dealer retains the completed Predelivery Checklist.

### 4.2.1 Checking Operating Safety System

The operating safety system protects the operator and the windrower from injury or damage. Perform these checks to ensure that the operating safety system is functioning correctly.



#### **DANGER**

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.



#### **DANGER**

Ensure that all bystanders have cleared the area.

1. With the engine running and the seat base in engine-forward mode, press the HEADER ENGAGE switch. Confirm that the header drive does **NOT** engage and that the Harvest Performance Tracker (HPT) displays LOCK SEAT BASE IN CAB-FORWARD.
2. With the engine running and the seat base in cab-forward mode, stand up and engage the HEADER DRIVE switch. The header drive should **NOT** engage and the HPT should display OPERATOR MUST BE SEATED.
3. With the engine running and the seat base unlocked, move the ground speed lever (GSL) out of PARK. Confirm that the engine immediately shuts down and that the HPT displays LOCK SEAT BASE and sounds a tone.
4. Shut down the engine and press the HEADER ENGAGE switch. Try starting the engine to confirm that the HPT displays DISENGAGE HEADER. If the engine turns over, the safety system requires adjustment. Refer to the windrower's technical manual for the adjustment procedures.
5. Shut down the engine and open the cooler box door. Try starting the engine to confirm that the HPT displays CLOSE COOLER BOX DOOR. If the engine turns over, the safety system requires adjustment. Refer to the windrower's technical manual for the adjustment procedures.

## PERFORMING PREDELIVERY CHECKS

6. Shut down the engine and perform the following safety system checks:
  - a. Open the hood.
  - b. Pry the steering interlock away from pintle arms (A) by inserting a wedge or pry bar between one of interlock channels (B) and the pintle arm.
  - c. Insert a wooden block approximately 19 mm (3/4 in.) thick between the opposite channel and the pintle arm so that the interlock channel is clear of the pintle arm.
  - d. Turn the steering wheel off-center and move the GSL to PARK.
  - e. Try starting the engine to confirm that the HPT displays LOCK STEERING WHEEL IN CENTER POSITION. The engine should **NOT** turn over. If the engine turns over, the safety system requires adjustment. Refer to the windrower's technical manual for the adjustment procedures.
  - f. Remove the key from the ignition.
  - g. Remove the wooden block and close the hood.

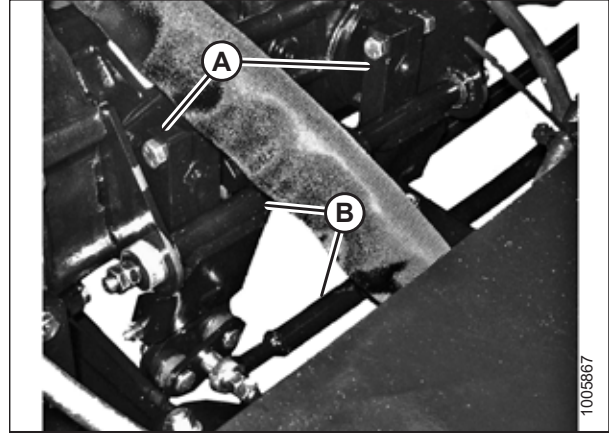


Figure 4.50: Pintle Arms

7. Center the steering wheel. Place the GSL in NEUTRAL but not in PARK. Try starting the engine to confirm that the HPT displays MOVE GSL INTO PARK. The engine should **NOT** turn over. If the engine turns over, the safety system requires adjustment. Refer to the windrower's technical manual for the adjustment procedures.
8. With the engine off, center the steering wheel. Place the GSL in PARK and ensure that the operator's station is **NOT** locked. Try starting the engine and confirm that the engine does **NOT** turn over, and the HPT displays LOCK SEAT BASE. If the engine starts, the safety system requires adjustment. Refer to the windrower's technical manual for the adjustment procedures.

### 4.2.2 Checking Harvest Performance Tracker Display Gauges

The Harvest Performance Tracker (HPT) display shows the windrower's performance gauges. Ensure that the gauges appear correctly on the HPT display.



#### **DANGER**

To avoid bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.



#### **WARNING**

Check to be sure all bystanders have cleared the area.



## PERFORMING PREDELIVERY CHECKS

1. If the windrower engine is not already running, start it. For instructions, refer to [4.1.10 Starting Engine, page 119](#).
2. If a header is not attached to the windrower, check that the no-header page appears.



Figure 4.51: HPT Display – No Header

3. If a header is attached, check that header screen (A) appears.
4. Ensure that red park symbol (B) is on.
5. Ensure that engine rpm (C) appears.
6. Ensure that fuel gauge (D), DEF gauge (E) and temperature gauge (F) appear on the display screen.

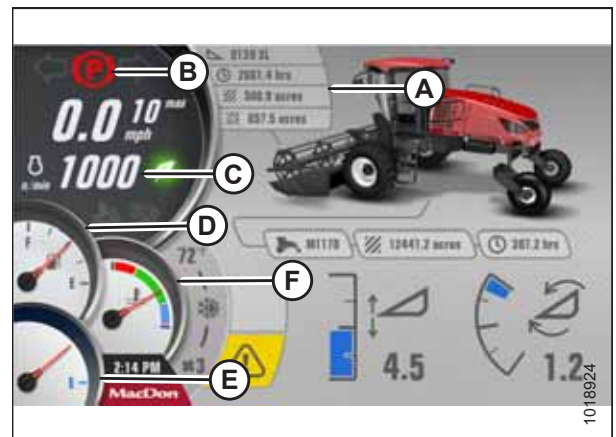


Figure 4.52: HPT Display – Header Attached

### Navigating Harvest Performance Tracker

Turning the scroll knob on the Harvest Performance Tracker (HPT) highlights the available options within a menu or changes a selected setting. Pushing the scroll knob selects a function or a menu item. The scroll and select functions are also duplicated on the ground speed lever (GSL) controls. Unless otherwise specified, these two buttons will always perform the same function. When the “select” instruction is given in this document, either the button on the GSL or the scroll knob on the HPT can be used.

1. Turn rotary scroll knob (A) clockwise to move the selection cursor down the screen, to the right of the screen, clockwise, or to increase a selected setting. Push the scroll knob to activate the selected item.
2. Turn rotary scroll knob (A) counterclockwise to move the selection cursor down the screen, to the left of the screen, counterclockwise, or to decrease a selected setting. Push the scroll knob to activate the selected item.

#### NOTE:

The scroll wheel on the back of the GSL and the SELECT button on the front of the GSL perform the same functions as the HPT scroll knob.



Figure 4.53: HPT Scroll Knob

## PERFORMING PREDELIVERY CHECKS

3. Press soft key 5 (A) to open the main menu.
4. Use HPT scroll knob (B) or GSL scroll wheel to place the red cursor over SETTINGS icon (C).
5. Press HPT scroll knob (B) or the GSL SELECT button to activate a selected MENU option.

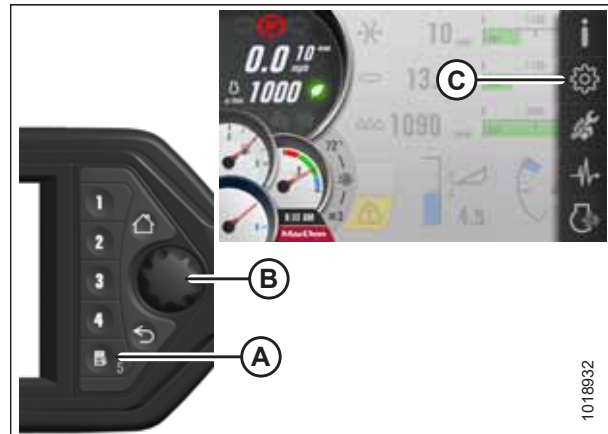


Figure 4.54: Main Menu

6. Press BACK button (A) on the HPT to return to the previous level of the menu structure.
7. Press HOME button (B) on the HPT to return to the last selected run screen (or to the header-disengaged screen).



Figure 4.55: HPT

### Setting Language and Units of Measurement

The language and unit of measurement options can be set in the Harvest Performance Tracker's (HPT) SETTINGS menu.

1. Navigate to the SETTINGS menu with soft key 5 and the Harvest Performance Tracker (HPT) scroll knob. For instructions, refer to [Navigating Harvest Performance Tracker, page 135](#).
2. Scroll to SCREEN icon (A) and select it.
3. Scroll to LANGUAGE AND UNITS icon (B), and select it to open the adjustment window.

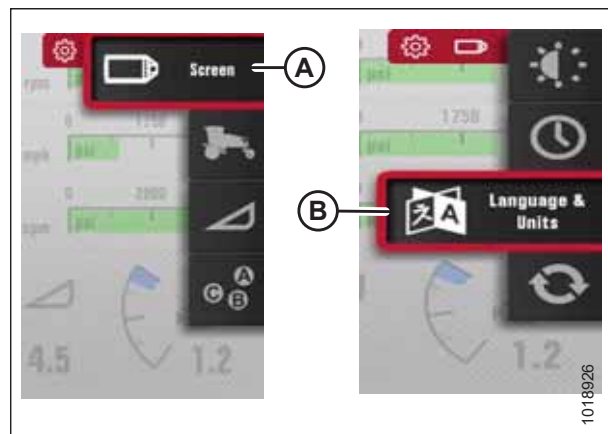


Figure 4.56: Language and Units

## PERFORMING PREDELIVERY CHECKS

4. Scroll through the available options on the HPT, select the desired item, and rotate the scroll knob to move through the available options:

- **LANGUAGE**

- CZECH
- DANISH
- ENGLISH (default)
- FRENCH
- GERMAN
- LATVIAN
- SPANISH

- **UNITS**

- METRIC
- USA (default)

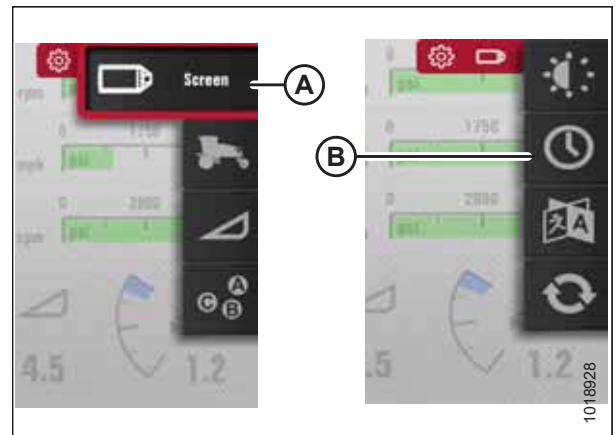
**NOTE:**

Refer to [6.4 Conversion Chart, page 186](#) for a comprehensive list of U.S. and metric units.

### *Setting Time and Date*

The time and date can be set in the Harvest Performance Tracker's (HPT) SETTINGS menu.

1. Navigate to the SETTINGS menu with soft key 5 and the HPT scroll knob. For instructions, refer to [Navigating Harvest Performance Tracker, page 135](#).
2. Scroll to SCREEN option (A) and select it.
3. Scroll to TIME AND DATE option (B), and select it to open the adjustment window.



**Figure 4.57: Time and Date**

## PERFORMING PREDELIVERY CHECKS

4. Scroll through the available options on the HPT display, select the desired option, and rotate the scroll knob to make adjustments.



Figure 4.58: Time and Date

### Setting Windrower Tire Size

The Harvest Performance Tracker (HPT) is factory-configured for 600/65R28 bar tires. If the windrower is equipped with a different type of tire, you will need to change this setting. Setting the proper tire size ensures that the HPT accurately tracks the windrower's ground speed, the area cut, and other productivity data.

1. Navigate to the SETTINGS menu with soft key 5 and the HPT scroll knob. For instructions, refer to [Navigating Harvest Performance Tracker, page 135](#).
2. Scroll to WINDROWER SETTINGS icon (A) and select it.
3. Scroll to TIRES icon (B), and select it to display the adjustment window.

#### NOTE:

The F3 shortcut button on the operator's console will also cause the WINDROWER SETTINGS menu to appear.



Figure 4.59: Tire Size

4. Scroll to highlight SELECT DRIVE TIRES menu (A).
5. Press the scroll knob to select the list.

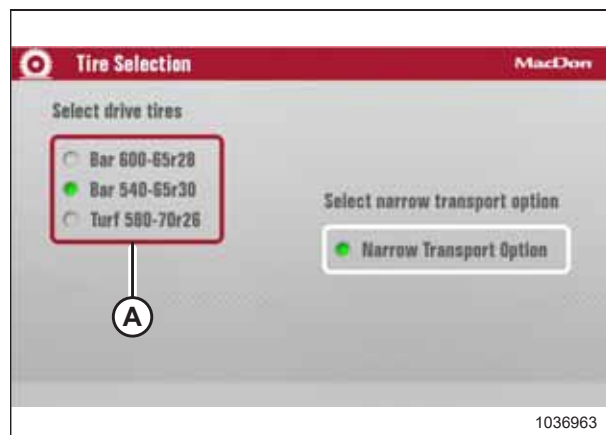


Figure 4.60: Tire Selection

## PERFORMING PREDELIVERY CHECKS

6. Scroll until the correct tire size is highlighted (A).
7. Press the scroll knob. Make sure green radio button (B) appears beside the tire size.
8. The tire size is now enabled.
9. You can now either exit the menu by pressing the BACK button, or exit the TIRE SELECTION page by pressing the HOME button.

### NOTE:

Pressing the BACK or HOME buttons will save the settings to memory.



Figure 4.61: Tire Selection

### Enabling Narrow Transport System in the Harvest Performance Tracker

The Harvest Performance Tracker (HPT) display includes a narrow transport menu option that must be enabled before extending or retracting the transport system.

1. Press MENU button 5 (A) to access the main menu.
2. Using SCROLL/SELECT wheel (B), select SETUP (C).

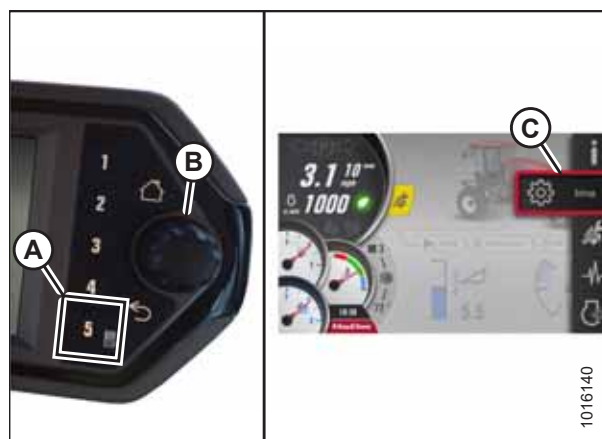


Figure 4.62: Narrow Transport Menu

3. Scroll and select WINDROWER icon (A).
4. Scroll and select TIRE SELECTION icon (B).

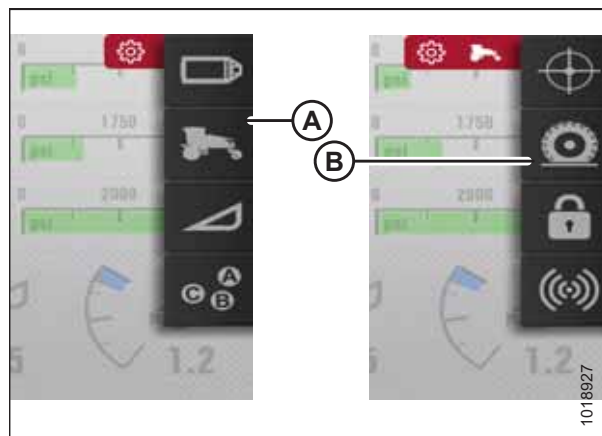


Figure 4.63: Narrow Transport Menu

## PERFORMING PREDELIVERY CHECKS

- On the Tire Selection page, scroll and select NARROW TRANSPORT radio button (A).
- Press the HOME button on the HPT to exit the Setup Menu.

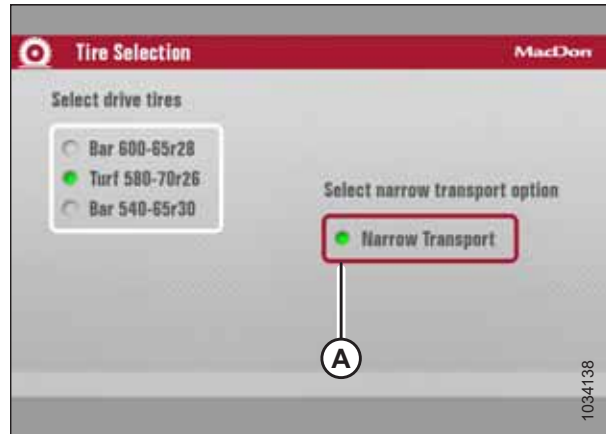


Figure 4.64: Narrow Transport Menu

### Adjusting Header Settings on Harvest Performance Tracker

Before operating the header, ensure that the Harvest Performance Tracker (HPT) settings are appropriate for your header.

- Navigate to the SETTINGS menu using soft key 5 and the HPT scroll knob. For instructions, refer to [Navigating Harvest Performance Tracker, page 135](#).

- Scroll to SET-UP HEADER option (A) and press the scroll knob to select it.

**NOTE:**

The settings displayed will vary depending on the type of header attached to the windrower.

- Scroll to highlight the appropriate option and press the scroll knob to select it.

For example, if a draper header is attached, and ATTACHMENTS (B) is selected, the available choice is DOUBLE DRAPER DRIVE.

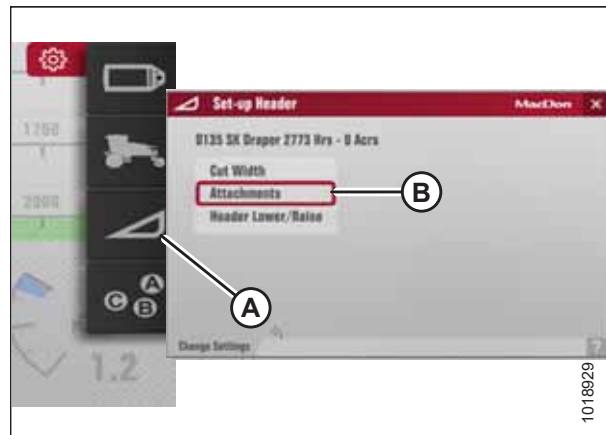


Figure 4.65: Header Settings

### 4.2.3 Checking Engine Speed

Check the idle speed and maximum speed of the engine to make sure it is running properly.



**DANGER**

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.



**DANGER**

Ensure that all bystanders have cleared the area.

## PERFORMING PREDELIVERY CHECKS

1. Start the engine.
2. Move the throttle to the idle position.
3. Check engine speed (A) on the Harvest Performance Tracker (HPT) display and compare it to the value in the table below.
4. Move the throttle to the maximum rpm position.
5. Check engine speed (A) on the HPT and compare it to the value in the table below.

### NOTE:

The engine speed mentioned in the table below assumes that the Eco Engine Control (EEC) feature is **not active**. For more information about EEC, refer to the windrower operator's manual.

**Table 4.1 Engine Speed**

Idle	Maximum (No Load)
1000 rpm	2300 rpm

6. Shut down the engine, and remove the key from the ignition.



**Figure 4.66: HPT Display**

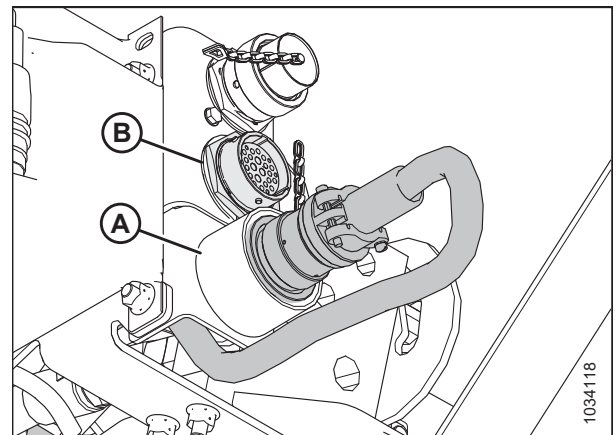
### 4.2.4 Checking Retract and Extend Functions of the Narrow Transport System

The narrow transport feature needs to be checked if the drive wheel legs and walking beam extensions fully extend and retract.

### **! DANGER**

To prevent injury or death from the unexpected start-up of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

1. Ensure the narrow transport function is enabled on the Harvest Performance Tracker (HPT). For instructions, refer to [Enabling Narrow Transport System in the Harvest Performance Tracker, page 139](#).
2. Shut down the engine, and remove the key from the ignition.
3. Retrieve the transport harness from holder (A), located behind the left platform, and connect it to electrical receptacle (B).



**Figure 4.67: Transport Electrical Connector**



## PERFORMING PREDELIVERY CHECKS

4. Rotate left signal light placard (A) to the down (horizontal) position before driving in narrow transport mode.

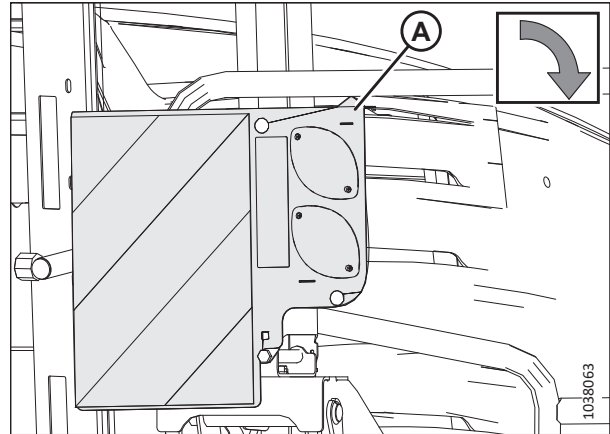


Figure 4.68: Left Signal Light Placard

5. At the front of the windrower, rotate walking beam lockout valve handle (A) to the open position (in line with the valve).
6. Remove lockout pins (B) from the sliding drive wheel legs.

### **WARNING**

Check to be sure all bystanders have cleared the area.

7. Ensure bystanders have cleared the area, start the windrower, and set the idle to low.

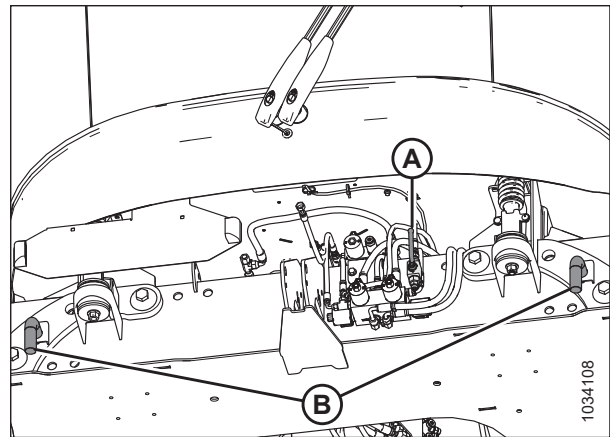


Figure 4.69: Transport Locks



## PERFORMING PREDELIVERY CHECKS

8. Press F5 (activate drive leg) or F6 (activate walking beam) button (A) on the operator's console to activate the narrow transport controls. The HPT will display an Important Message (B) and produce an alarm.

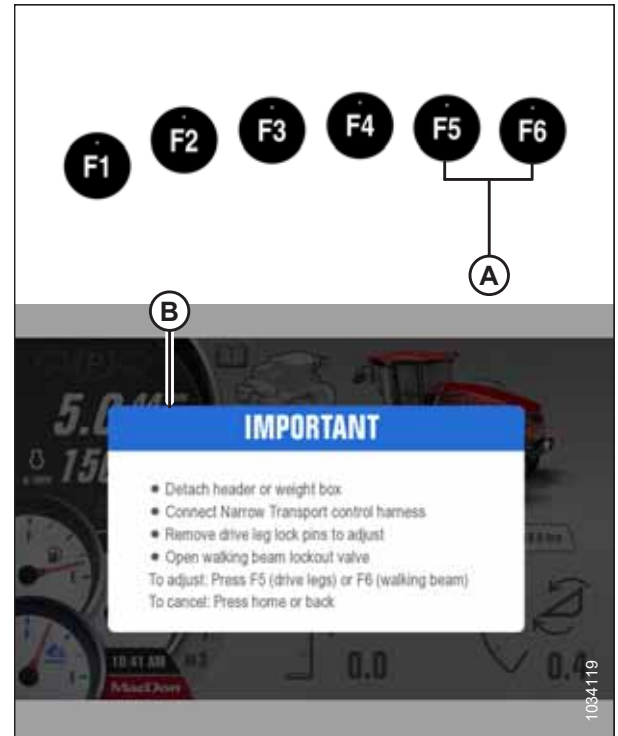


Figure 4.70: Narrow Transport Important Message

9. Press F5 button (A) on the operator's console to activate the drive wheel leg controls. The F5 page (B) will display on the HPT.

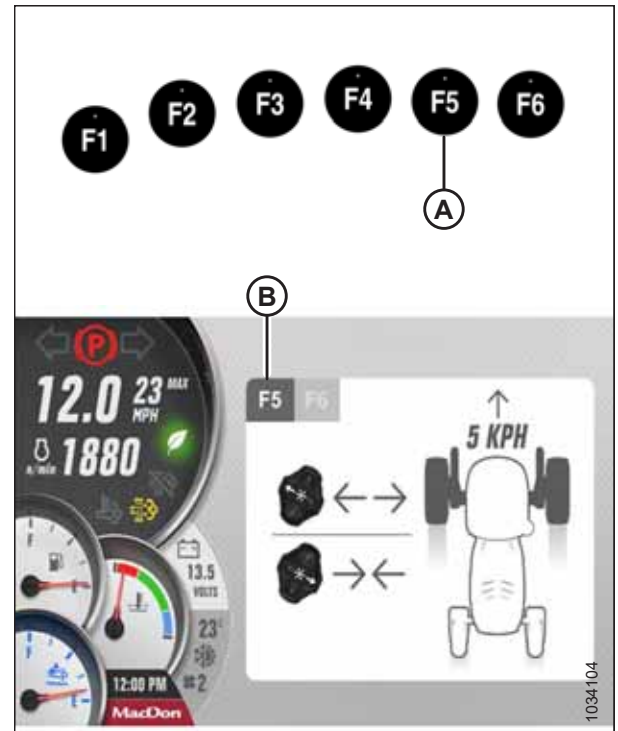


Figure 4.71: Narrow Transport Control Page

## PERFORMING PREDELIVERY CHECKS

10. Move the ground speed lever (GSL) out of PARK and slowly accelerate to 5–8 km/h (3–5 mph).
11. To retract the drive wheel legs, press and hold REEL AFT button (B) on the GSL while windrower is moving.
12. To extend the drive wheel legs, press and hold REEL FORE button (A) on the GSL while the windrower is moving.
13. Bring the windrower to a complete stop, and place the GSL in PARK.



Figure 4.72: Transport Control Buttons

14. Press F6 button (A) on the operator's console to activate the walking beam controls. The F6 page (B) will display on the HPT.
15. Pivot the windrower to turn the caster wheels sideways as shown on the F6 page (B).

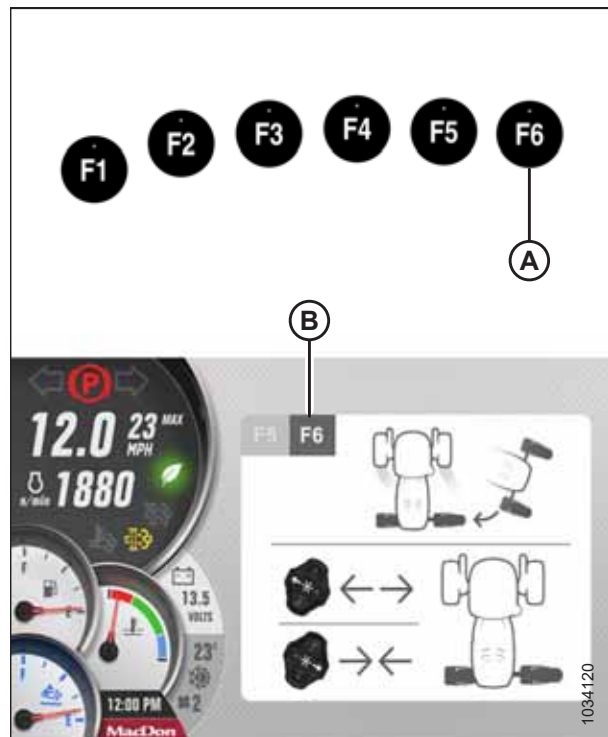


Figure 4.73: Narrow Transport Controls

## PERFORMING PREDELIVERY CHECKS

16. To retract the walking beam, press and hold REEL AFT button (A) on GSL.
17. To extend the walking beam, press and hold REEL FORE button (B) on GSL.

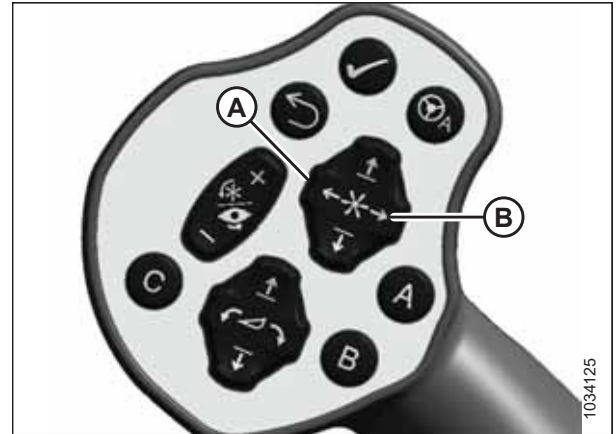


Figure 4.74: Transport Control Buttons

18. Repeat Step 8, page 143 to Step 17, page 145 five times to ensure it is working properly.
19. When complete, exit the narrow transport control page by pressing button F5 or F6 again (whichever is active). The exit transport operation warning will display on the HPT.

**NOTE:**

Press F5 or F6 on the console, or HOME or RETURN on the HPT to cancel transport operation at any time.

20. Shut down the engine, and remove the key from the ignition.



Figure 4.75: Exit Transport Operation Warning

21. Reinstall lock pins (B) into the drive wheel legs.
22. Turn the walking beam lockout valve (A) to the closed position (90 degrees from the valve).

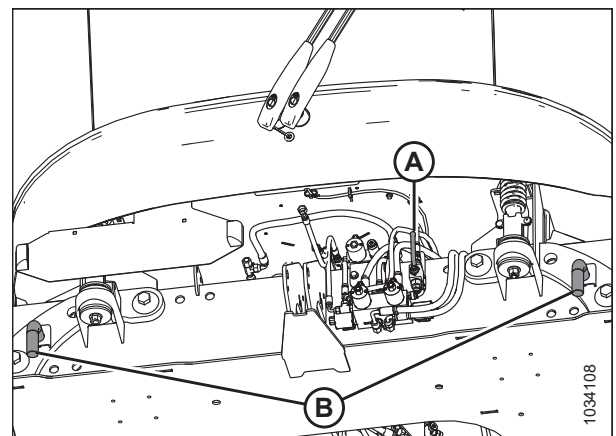


Figure 4.76: Transport Locks

## PERFORMING PREDELIVERY CHECKS

23. Disconnect the narrow transport electrical harness from connector (B) and return it to holder (A).

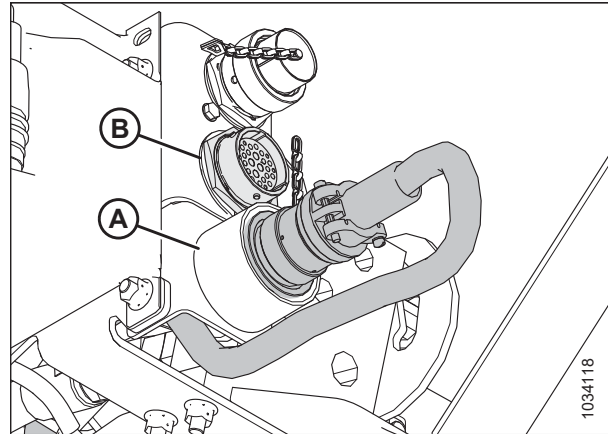


Figure 4.77: Transport Electrical Connector

### 4.2.5 Checking Selective Catalytic Regeneration Conditioning Mode

The selective catalytic regeneration (SCR) system is part of the exhaust aftertreatment system. The SCR conditioning process can activate any time the windrower is running so long as the INHIBIT SCR CONDITIONING switch is set to OFF. Ensure that this feature can be successfully turned on and off.

The SCR conditioning inhibit mode is off when indicator (A) on the Harvest Performance Tracker (HPT) display is not highlighted.

If SCR conditioning mode is on, then indicator (A) will be highlighted. This will prevent the SCR process from occurring.

#### NOTE:

If the SCR system is inhibited for an extended period, the engine will begin to derate its power levels until manual SCR conditioning is performed. Refer to the windrower operator's manual for further details.

If the SCR conditioning inhibit symbol is highlighted, turn SCR inhibit mode off as follows:

1. Press soft key 5/ menu button (A) on the HPT.
2. Press soft key 5/ menu button (A) next to EXHAUST AFTERTREATMENT icon (B).



Figure 4.78: HPT Display

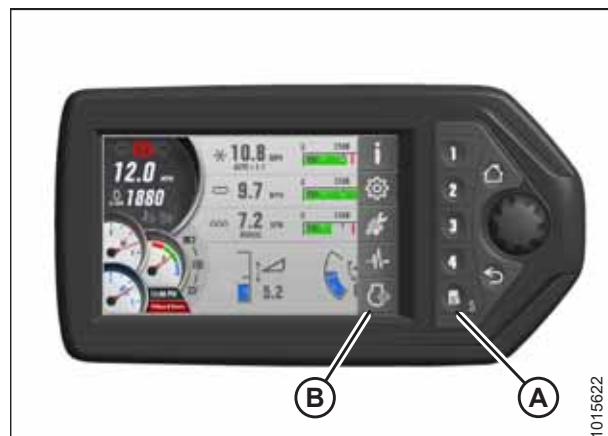


Figure 4.79: HPT Display

## PERFORMING PREDELIVERY CHECKS

3. To turn off SCR conditioning inhibit mode, press soft key 5 / menu button (A) next to INHIBIT SCR CONDITIONING icon (B) and hold it for 3 seconds. Highlighted SCR CONDITIONING INHIBIT icon (C) turns off.



Figure 4.80: HPT Display

### 4.2.6 Checking Exterior Lights

Visibility is important when driving on the road or working on the field. Ensure all exterior lights are functioning properly.



#### **DANGER**

**Never start or move the machine until you are sure that all bystanders have cleared the area.**

1. Start the engine. For instructions, refer to the windrower operator's manual.

## PERFORMING PREDELIVERY CHECKS

2. Remove the plastic film from the LED lighting.
3. Rotate the operator's seat to cab-forward mode.
4. Press FIELD LIGHT switch (A).
5. Check that front field lights (B), rear field lights (C), and rear swath lights (D) are functioning.
6. Check that white clearance lights (E) are on.

**NOTE:**

These lights are automatically activated and will stay on when the engine is running.

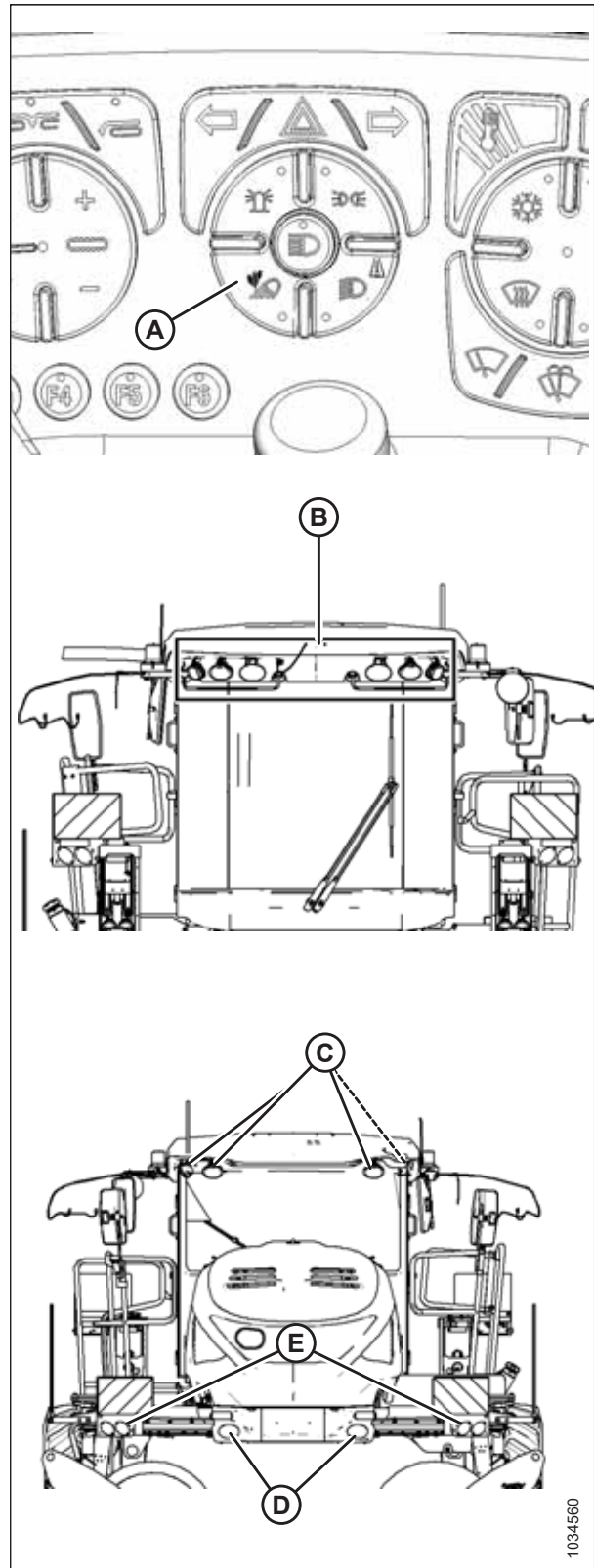


Figure 4.81: Field Lights

## PERFORMING PREDELIVERY CHECKS

7. Rotate the operator's seat to engine-forward mode.
8. Press ROAD LIGHT switch (A), and check that front road lights (B) and rear red tail/brake lights (C) are functioning.
9. Press HIGH/LOW switch (D) and check lights (B).
10. Press TURN SIGNAL switches (E) on the console and check amber lights (F) and turn signal repeater lights (G).
11. Press HAZARD LIGHT switch (G) and check flashing hazard lights (F).
12. Check that white clearance lights (H) are on.

### NOTE:

These lights are automatically activated and will stay on when the engine is running.

13. Press the switches to shut off the lights.

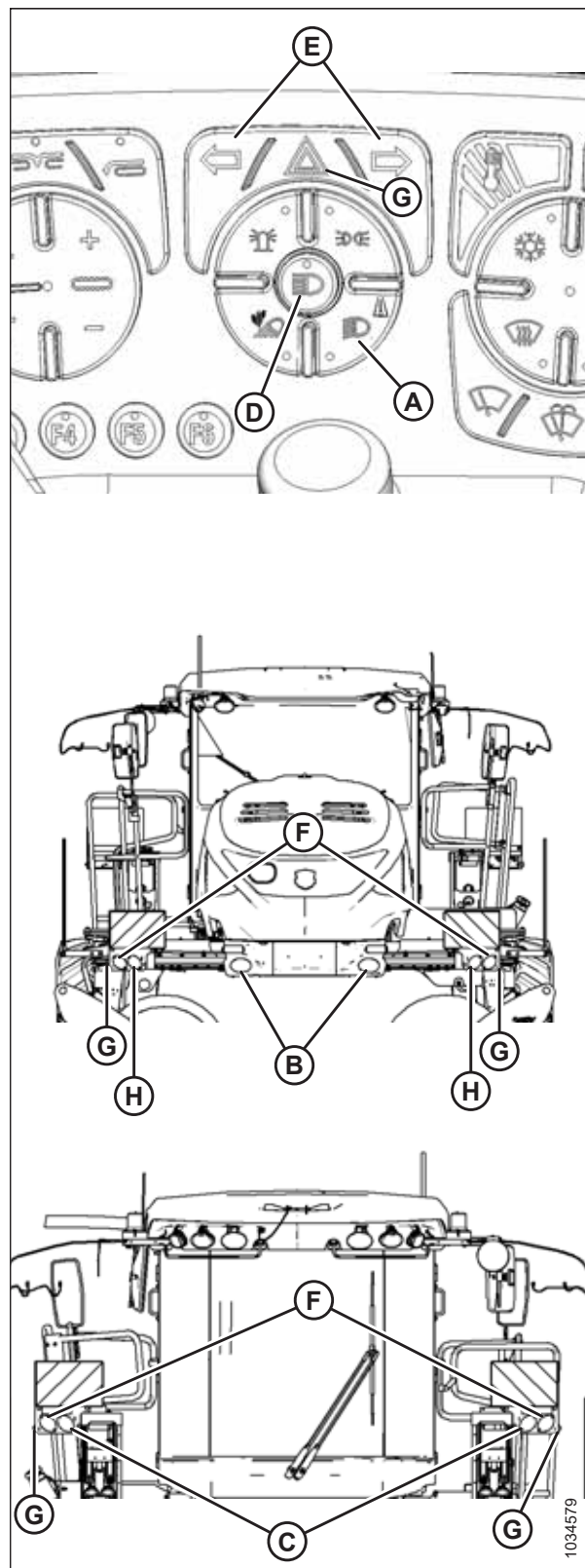


Figure 4.82: Road Lights – Engine-Forward



## PERFORMING PREDELIVERY CHECKS

14. Push BEACON SWITCH (A), and check that amber beacons (B) are functioning.
15. Press the switch to shut off the beacons.

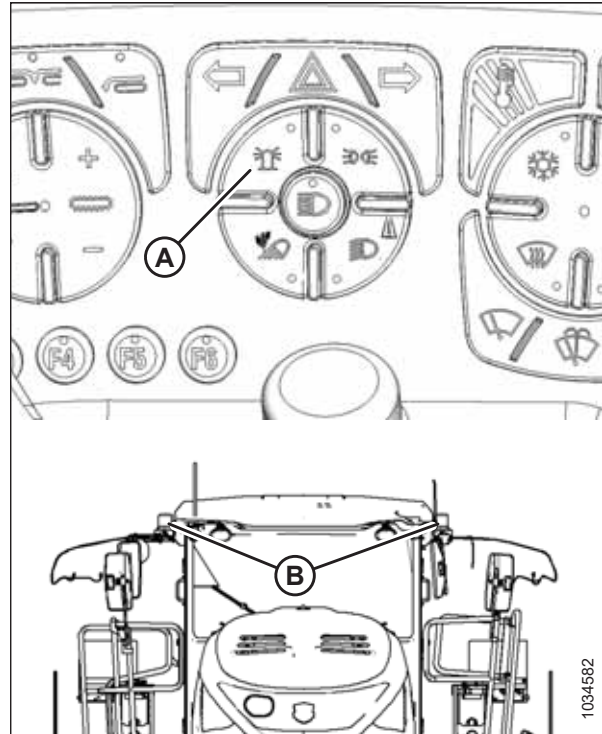


Figure 4.83: Beacons

### 4.2.7 Checking Horn

The horn is a safety device for notifying other people of the windrower's presence.

1. Push HORN button (A) and listen for the horn.

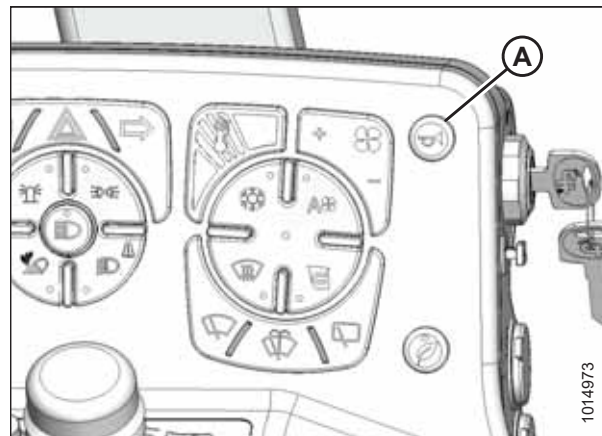


Figure 4.84: Horn Button



### 4.2.8 Checking Interior Lights

Interior lights provide visibility within the cab. Check all parts of the interior lighting system for functionality.

1. Open the cab door. Confirm that interior light (A) turns on.
2. Enter the cab and close the door. Confirm that interior light (A) darkens.



Figure 4.85: Interior Light

3. Turn the IGNITION key to the RUN position.
4. Push OVERHEAD DOME LIGHT switch (A) to ON position (B). Confirm that the light turns on.
5. Push the LIGHT switch to DOOR position (C). Confirm that the light is off.
6. Open the door and check that the light turns on. Leave the door open.
7. Push switch (A) to OFF position (D). Confirm that the light is off.

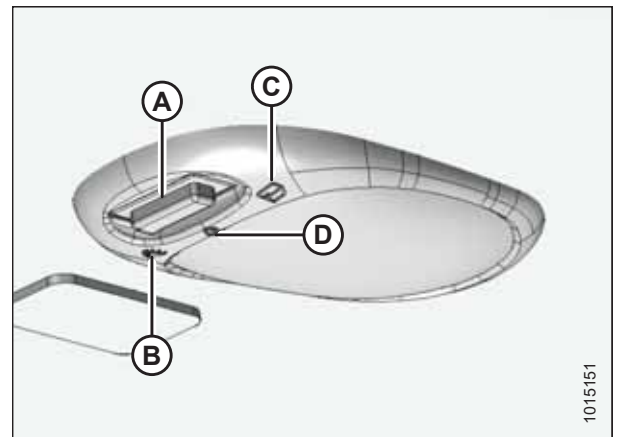


Figure 4.86: Interior Light

### 4.2.9 Checking Climate Controls

The cab climate system is comprised of the cab air conditioner (A/C), fans, vents, and the defroster. Check all of these features for functionality.

#### DANGER

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

#### DANGER

Ensure that all bystanders have cleared the area.

## PERFORMING PREDELIVERY CHECKS

1. Start the engine. Allow the engine to reach operating temperature.
2. If starting a machine that has been stored for more than 1 week, refresh the A/C system as follows:
  - a. Press + (A) on the FAN SPEED switch to start the fan, adjust temperature control (B) to the highest heat setting, and press A/C switch (C) if necessary so that the LED light is **NOT** lit.
  - b. Move A/C switch (C) to the ON position. The A/C LED will light up. Leave the A/C switch in the ON position for 1 second. Move A/C switch (C) to the OFF position for 5 to 10 seconds. Repeat this step 10 times.

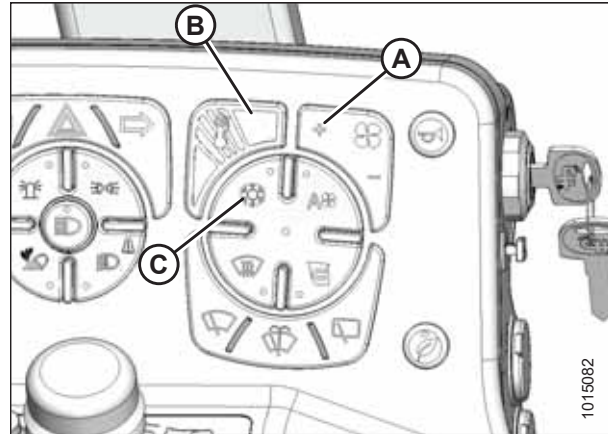


Figure 4.87: A/C Controls

3. Press AUTO FAN switch (A). The orange LED will light up. Press RED TEMPERATURE CONTROL switch (B) until warm air flows through the cab vents.
4. Press BLUE TEMPERATURE CONTROL switch (C) until cool air enters the cab.
5. Press FAN SPEED switch (D) (+ or –) and note any change in airflow in the cab. The AUTO FAN light should be off.
6. Press RECIRCULATING AIR switch (E) and note any change in airflow in the cab.
7. Press WINDSHIELD DEFOG/DEFROST switch (F) and confirm that the windshield vents are blowing.

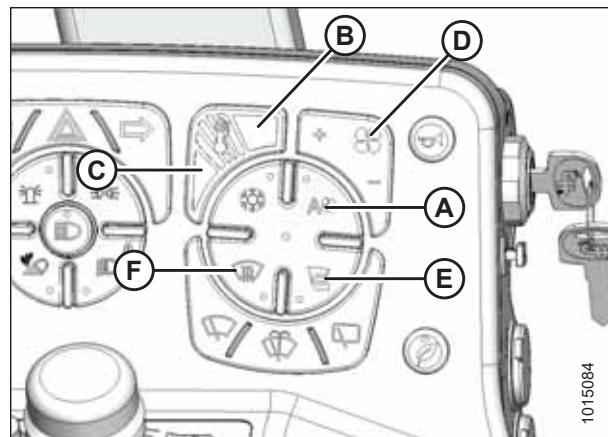


Figure 4.88: Climate Controls

### 4.2.10 Checking the Radio and Activating Bluetooth® Feature

M1 Series Windrowers are factory-equipped with a Bluetooth®-enabled radio and CD/DVD player. Ensure that the radio's basic features are working correctly.

Radio (A) and two speakers (B) are factory-installed in the cab headliner. The radio operates in AM, FM, CD/DVD, and USB modes. It also supports Bluetooth® wireless technology audio streaming and hands-free calling.

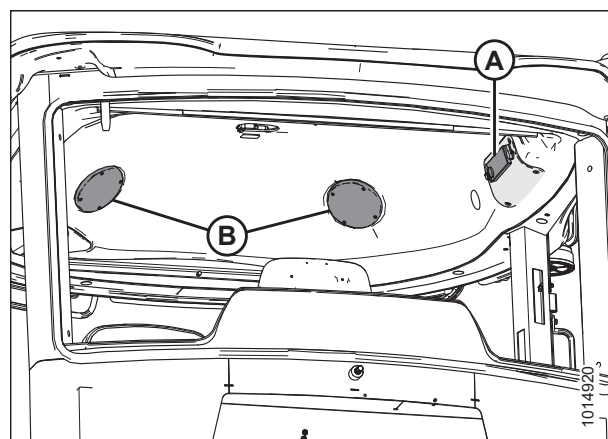


Figure 4.89: Radio and Speakers

## PERFORMING PREDELIVERY CHECKS

1. To check the radio, follow this procedure:
  - a. Turn the IGNITION key to the RUN position.
  - b. Press POWER button (A) to turn the radio on. Hold the POWER button to turn it off.

**NOTE:**

The button will light up red when OFF and blue when ON.

- c. Press BAND/BACK button (B) to change radio bands as follows:
  - FM1
  - FM2
  - FM3
  - AM1
  - AM2
- d. Rotate Volume/Select knob (C) to change the volume level.
- e. Insert a CD or DVD into disc slot (D), or connect a USB storage device to the unit. The radio will automatically switch modes and begin playback after the media is successfully loaded.

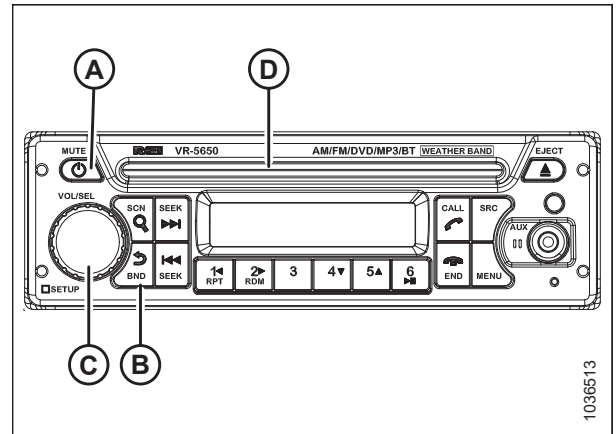


Figure 4.90: Radio

2. To activate the Bluetooth® feature:
  - a. Press POWER button (A) to turn the radio on.
  - b. Press and hold VOL/SEL knob (B) for 2 seconds. MENU appears on screen (C).
  - c. Rotate VOL/SEL (B) to highlight BT SET menu and press VOL/SEL to select it. BLUETOOTH ON/OFF (C) appears.
  - d. Press VOL/SEL to select BLUETOOTH.
  - e. Rotate the VOL/SEL knob so that ON appears and press VOL/SEL.
  - f. Rotate the VOL/SEL knob and select DISCOVER.
  - g. Rotate the VOL/SEL knob to display ON and press VOL/SEL.

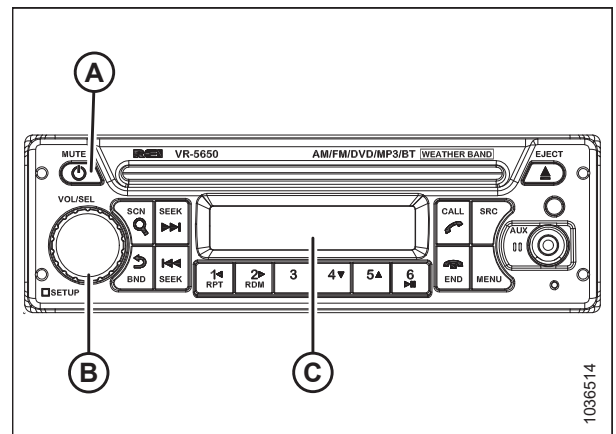


Figure 4.91: Bluetooth® Radio

### 4.2.11 Setting Radio for USA or European Region

Access the radio's service mode to switch between European and North American radio frequency bands.

**NOTE:**

The radio is set to the USA frequency at the factory.

## PERFORMING PREDELIVERY CHECKS

1. Turn the radio on and select the RADIO mode.
2. To enter the SERVICE mode, press and hold buttons 1 (A), 3 (B), and SEL (C) for 3 seconds. The word SERVICE followed by the current region setting (USA or EUR) appears.
3. Rotate the SEL button (C) to select the region (USA or EUR).
4. Press the SEL button (C) to save the selection.

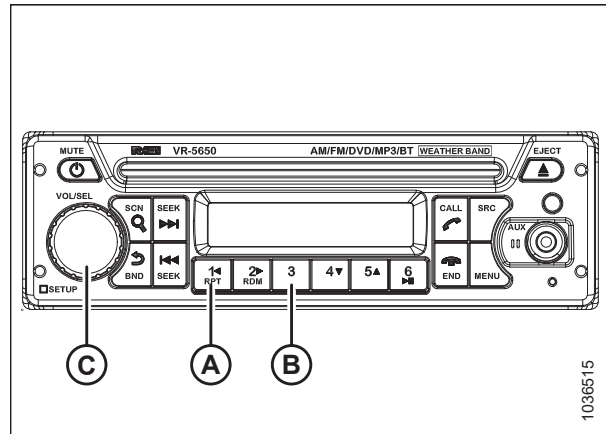


Figure 4.92: Radio Service Mode – Radio Model VR-5650

### 4.2.12 Testing Secondary Brakes – Windrowers Sold In Germany Only

You must test the secondary brakes before using them for the first time.



#### WARNING

Read the entire procedure before testing the brakes. Do NOT distract yourself or read the procedure while driving. Wear your seat belt during all tests.

**Complete the following steps BEFORE performing Test #1 – Test #3**

1. Park the windrower on a flat, level surface.
  - Make sure there is enough distance [150 m (500 ft.)] to drive windrower while testing the brakes.
  - Perform the tests on dry pavement if available.
2. Attach a weight box (A) (MD #B6974) to the windrower.
  - Make sure to secure the weight box using the locking pins. Secure locking pins with hairpins.
  - Lift the weight box so it is approximately 400 mm (15 3/4 in.) off the ground during all tests.
3. Place the windrower in **ENGINE-FORWARD** mode.
4. Wear your seat belt.

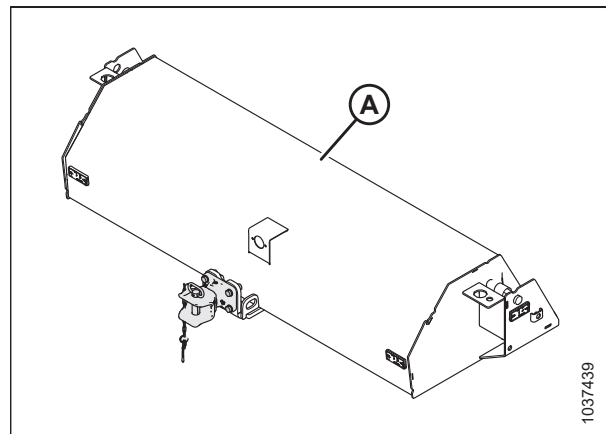


Figure 4.93: Weight Box

**Test #1 —Stop the windrower WITHOUT using the secondary brakes so that you will be able to compare the result to the secondary brake system. The difference is subtle.**

1. Set the engine speed to 1600–1700 rpm.
2. Push the ground speed lever (GSL) completely FORWARD.
3. Drive a few meters, and then pull the GSL into NEUTRAL.
4. Once the windrower comes to a complete stop, place the GSL into PARK.
5. Repeat the test until you understand what it feels like to stop the windrower without using the secondary brakes.

## Test #2 —Test the secondary brakes while stationary.

1. Set the engine speed to 1600–1700 rpm.
2. Press GSL button “C” (C).
  - Engine speed should drop to 1500 rpm.
  - Secondary brake lamp (B) should turn green, which means the system is enabled—but does **NOT** necessarily mean the brakes are engaged. If icon (B) is missing, then shut down the engine and contact MacDon for assistance.
3. From PARK, nudge the GSL into FORWARD, into REVERSE, and then into NEUTRAL.
  - The engine should labor but the windrower should **NOT** move.
  - Park brake lamp (A) should remain red.
  - Secondary brake lamp (B) should remain green.
  - The message “Brake system on” should appear on the Harvest Performance Tracker (HPT) temporarily, but this message just means that the **PARK** brake is engaged when the GSL is outside of PARK.
4. Place the GSL into PARK. Press GSL button “C” to disable the secondary brake system.
  - The engine speed should return to the speed set in Step 1, [page 155](#).
  - The secondary brake lamp should turn grey.

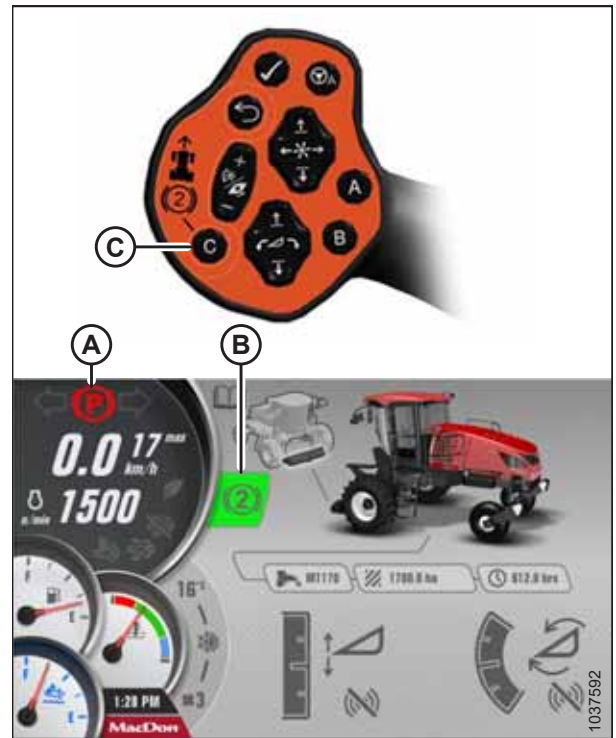
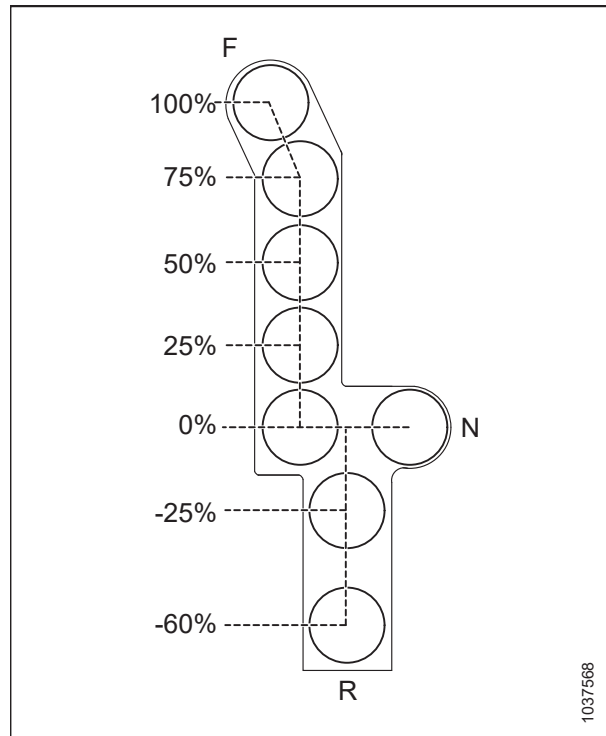


Figure 4.94: GSL and HPT

## PERFORMING PREDELIVERY CHECKS

### ***Test #3 —Test the secondary brakes while driving.***

1. Set the engine speed to 1600–1700 rpm.
2. Push the GSL completely FORWARD.
3. Press GSL button “C”. Confirm the secondary brake lamp turns green.
4. Drive a few meters, and then quickly (but not too quickly) pull the GSL into NEUTRAL.
  - The windrower should come to a complete stop, noticeably more promptly than when you stopped the windrower during Test #1.
  - Once the GSL is halfway (50%) to NEUTRAL (0%), the engine speed will drop to 1500 rpm and the secondary brakes will start to engage. The brakes will fully engage once the GSL is 15% or closer to NEUTRAL. For reference, refer to Figure 4.95, [page 156](#).
5. Place the GSL into PARK, and shut down the engine.



**Figure 4.95: GSL Position**

### 4.3 Checking Manuals

MacDon includes manuals with every windrower to provide information on the windrower's safe operation and maintenance.

Manuals are stored in one of the manual storage cases (A) behind the operator's seat.

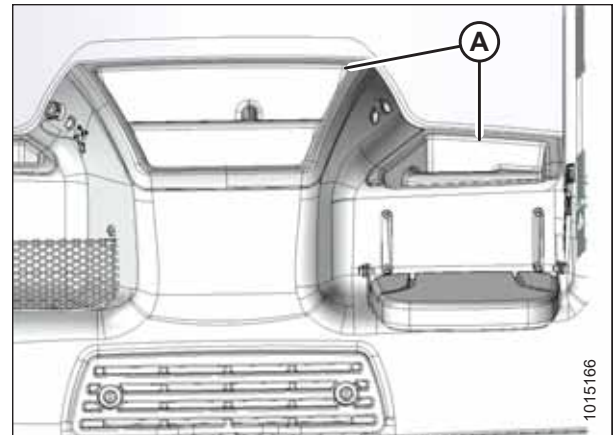


Figure 4.96: Manual Storage Case

1. Ensure that the following manuals are included with the windrower:

- Operator's Manual
- Parts Catalog
- Quick Card
- Engine Manual



Figure 4.97: Manuals and Quick Card

## 4.4 Performing Final Steps

Prepare the windrower cab for the Operator and, if necessary, install any remaining kits.

1. After the predelivery checks are complete, remove the plastic covering from the Harvest Performance Tracker (HPT) and the seats.
2. If the optional GPS kit is included, locate the GPS mount parts bag with label (A) inside the cab. Install the GPS mount according to the instructions included with the EZ-Pilot® or Autopilot™ bundle. If you will not be installing the GPS kit, store the GPS mount parts bag in the toolbox.
3. Remove the Keep This Door Closed sign from the right door **AFTER** the right leg is repositioned to the field position.



Figure 4.98: Label for Optional GPS Mounting Kit

4. Do **NOT** remove the drive wheel torque procedure decal from the windshield.



Figure 4.99: Windshield Decal



## Chapter 5: Attaching a Header to the Windrower

This chapter specifies which headers are compatible with the windrower and provides instructions for attaching the header.

### 5.1 D1X or D1XL Series Draper Header

This section details the procedures necessary to physically attach a D1X or D1XL header to a windrower and to attach its hydraulic and electrical connections. The procedures may vary slightly depending on the configuration of the windrower.

#### 5.1.1 Attaching Draper Header Supports

Draper header supports are required to attach the header to the windrower.

#### DANGER

**To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.**

If not installed, attach the draper header support (supplied with the header) to the windrower lift linkage as follows:

1. Shut down the engine, and remove the key from the ignition.
2. Remove the hairpin from clevis pin (B) on draper header support (A). Remove clevis pin (B).

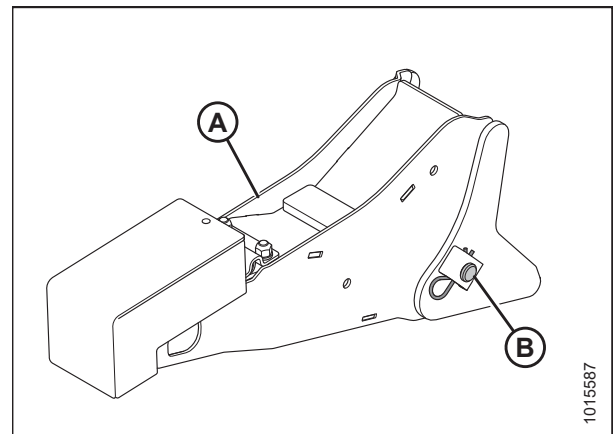


Figure 5.1: Draper Header Support

3. Position draper header support (B) on windrower lift linkage (A). Reinstall clevis pin (C).

#### NOTE:

To ensure that the pin doesn't snag the windrow, install the clevis pin on the outboard side of the draper header support.

4. Secure clevis pin (C) with hairpin (D).
5. Repeat Step 2, page 159 to Step 4, page 159 to install the remaining draper header support.

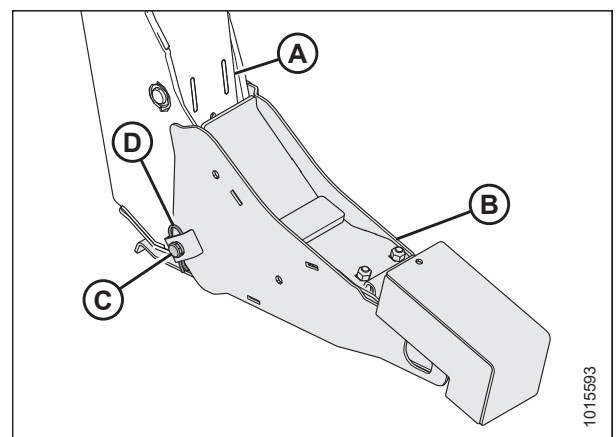


Figure 5.2: Draper Header Support

## 5.1.2 Attaching D1X or D1XL Series Draper Header

The windrower may have an optional self-aligning hydraulic center-link, which allows control over the vertical position of the center-link from the cab.

### DANGER

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

#### NOTE:

Draper header supports must be installed onto the windrower lift linkage before starting this procedure. For instructions, refer to [5.1.1 Attaching Draper Header Supports, page 159](#).

1. Shut down the engine, and remove the key from the ignition.
2. Extend the windrower transport into field mode. Refer to the windrower operator's manual.

3. **Windrowers without the self-aligning center-link kit:**  
Relocate pin (A) in the frame linkage as required to raise center-link (B) until the hook is above the attachment pin on the header.

#### IMPORTANT:

Ensure that the center-link is positioned high enough that it does not contact the header as the windrower approaches the header.

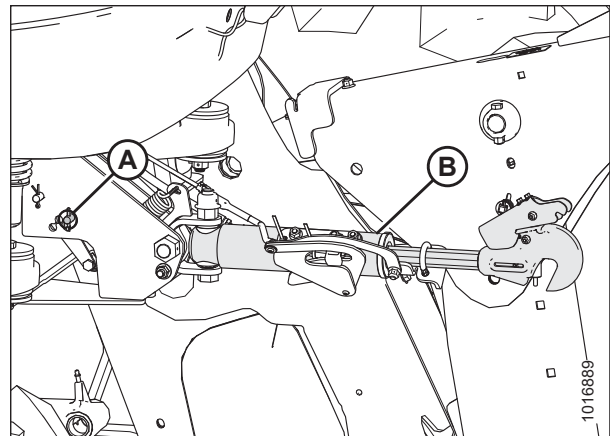


Figure 5.3: Center-Link without Self-Alignment

4. Rotate left signal light placard (A) to the up (vertical) position before connecting the windrower to a header.

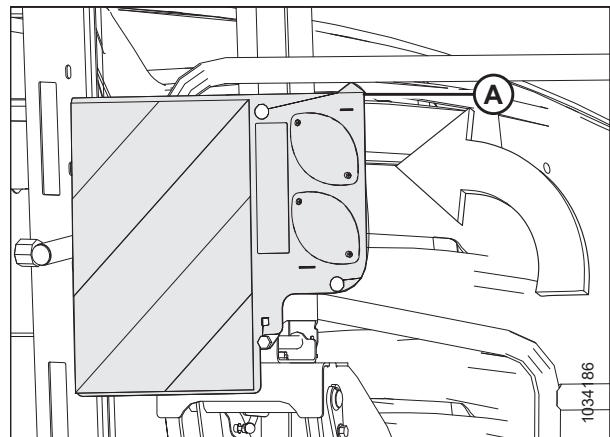


Figure 5.4: Left Signal Light Placard

## ATTACHING A HEADER TO THE WINDROWER

5. Remove hairpin (A) from pin (B), and remove pin (B) from the header leg. Repeat this step on the opposite header leg.

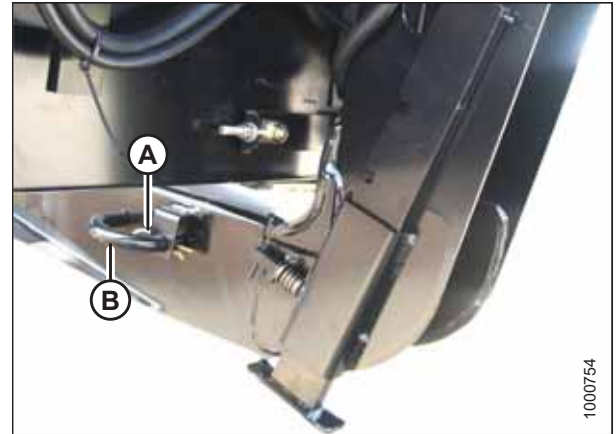


Figure 5.5: Header Leg

### DANGER

Ensure that all bystanders have cleared the area.

6. Start the engine.
7. **If you are lowering the header lift legs WITH a header or weight box attached to the windrower**, proceed to Step 11, page 162.

**If you are lowering the header lift legs WITHOUT a header or weight box attached to the windrower**, fully release the tension in header float springs (A):

- If prompted by the Harvest Performance Tracker (HPT) to remove the float, then remove the float and proceed to Step 11, page 162.
- If not prompted by the HPT to remove the float, then proceed to Step 8, page 162 to remove the float manually.

#### IMPORTANT:

When lowering the header lift legs without a header or weight box attached to the windrower, ensure that the tension on the float springs is fully released. This will prevent damage to the header lift linkages.

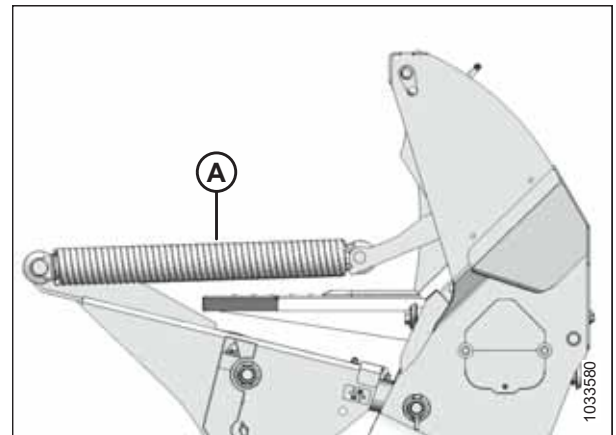


Figure 5.6: Header Float Springs

## ATTACHING A HEADER TO THE WINDROWER

8. Press scroll knob (A) on the HPT to display the QuickMenu system.
9. Rotate scroll knob (A) to highlight HEADER FLOAT symbol (B), and press the scroll knob to select it.



Figure 5.7: HPT Display

10. On the FLOAT ADJUST page, press soft key 3 (A) to remove the float.



Figure 5.8: HPT Display

11. **Windrowers equipped with the self-aligning center-link kit:**
  - a. Press HEADER DOWN switch (E) on the ground speed lever (GSL) to fully retract the header lift cylinders.
  - b. Press REEL UP switch (B) on the GSL to raise the center-link until the hook is above the attachment pin on the header.

### IMPORTANT:

If the center-link is too low, it may contact the header as the windrower approaches the header.

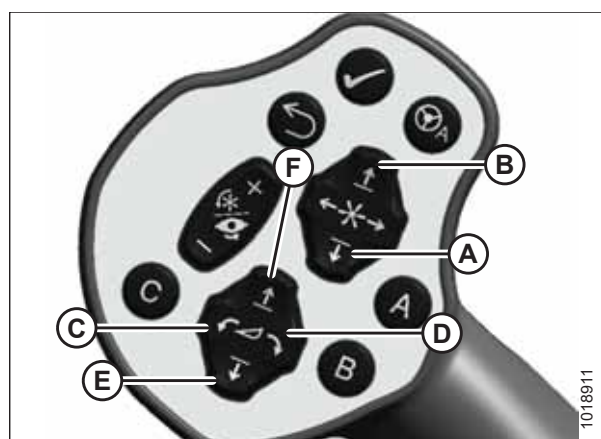


Figure 5.9: GSL Switches

- |                      |                    |
|----------------------|--------------------|
| A - Reel Down        | B - Reel Up        |
| C - Header Tilt Down | D - Header Tilt Up |
| E - Header Down      | F - Header Up      |

## ATTACHING A HEADER TO THE WINDROWER

12. Drive the windrower slowly forward until draper header supports (A) enter header legs (B). Continue driving slowly forward until the lift linkages contact the support plates in the header legs and the header is nudged forward.
13. Ensure that the lift linkages are properly engaged in the header legs and are in contact with the support plates.

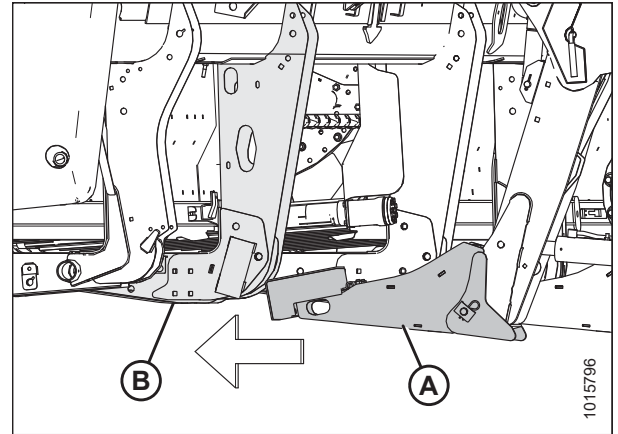


Figure 5.10: Header Leg and Draper Header Support

14. **Windrowers equipped with the self-aligning center-link kit:**
  - a. Adjust the position of center-link cylinder (A) with the switches on the GSL until hook (B) is above the header attachment pin.  
**IMPORTANT:**  
Hook release (C) must be down to enable the self-locking mechanism to function.
  - b. If hook release (C) is open (in the up position), shut down the engine, and remove the key from the ignition. Manually push hook release (C) down after the hook engages the header pin.
  - c. Lower center-link (A) onto the header with the REEL DOWN switch on the GSL until the center-link locks into position and hook release (C) is down.
  - d. Check that the center-link is locked onto the header by pressing the REEL UP switch on the GSL.

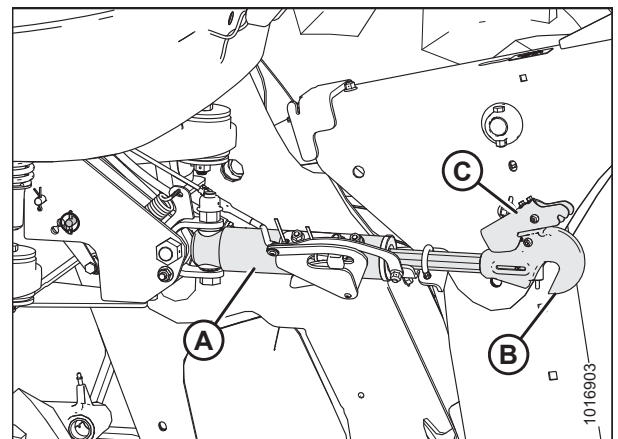


Figure 5.11: Hydraulic Center-Link

## ATTACHING A HEADER TO THE WINDROWER

### 15. Windrowers without the self-aligning center-link kit:

- Press the HEADER TILT UP or HEADER TILT DOWN cylinder switches on the GSL to extend or retract the center-link cylinder until the hook is aligned with the header attachment pin.
- Shut down the engine, and remove the key from the ignition.
- Push down on the rod end of link cylinder (B) until the hook engages and locks onto the header pin.

#### IMPORTANT:

The hook release must be down to enable the self-locking mechanism to function. If the hook release is open (in the up position), manually push it down after the hook engages the pin.

- Check that center-link (A) is locked onto the header by pulling upward on rod end (B) of the cylinder.



#### DANGER

Ensure that all bystanders have cleared the area.

- Start the engine.

- Press HEADER UP switch (A) to raise the header to its maximum height.

#### NOTE:

If one end of the header does **NOT** fully rise, rephase the lift cylinders as follows:

- Press and hold HEADER UP switch (A) until both cylinders stop moving.
- Continue to hold the switch for 3–4 seconds. The cylinders are now phased.

- Shut down the engine, and remove the key from the ignition.

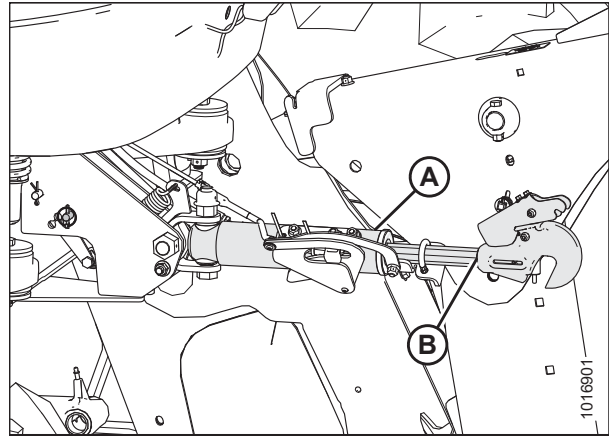


Figure 5.12: Hydraulic Center-Link



Figure 5.13: GSL

## ATTACHING A HEADER TO THE WINDROWER

18. Engage the safety props on both lift cylinders as follows:

- a. Pull lever (A) toward you to release it, and then rotate it toward the header to lower the safety prop onto the cylinder.
- b. Repeat the previous step for the opposite lift cylinder.

**IMPORTANT:**

Ensure that the safety props engage over the cylinder piston rods. If the safety prop does **NOT** engage properly, raise the header until the safety prop fits over the rod.

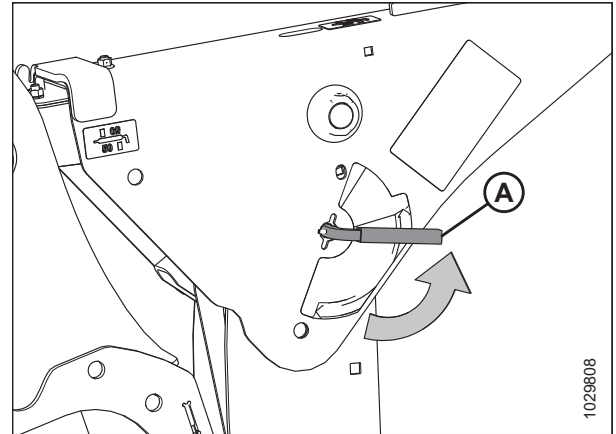


Figure 5.14: Safety Prop Lever

19. Install pin (B) through the header leg, ensuring that the pin engages the U-bracket in the draper header support and secure it with hairpin (A). Repeat this step on the other side of the header.
20. Raise header stand (D) to its storage position by pulling spring pin (C) and lifting the stand. Release the spring pin to secure the stand.

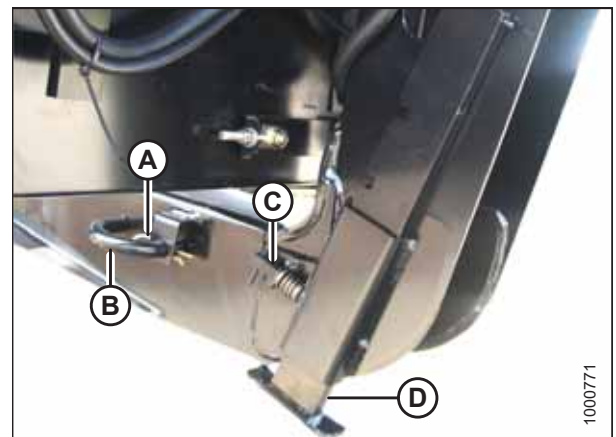


Figure 5.15: Header Leg

21. Disengage the safety props on both lift cylinders as follows:

- a. Turn lever (A) away from the header to raise the safety prop until the lever locks into the vertical position.
- b. Repeat the previous step for the opposite cylinder.

**NOTE:**

If the safety prop will **NOT** disengage, raise the header to release the prop.

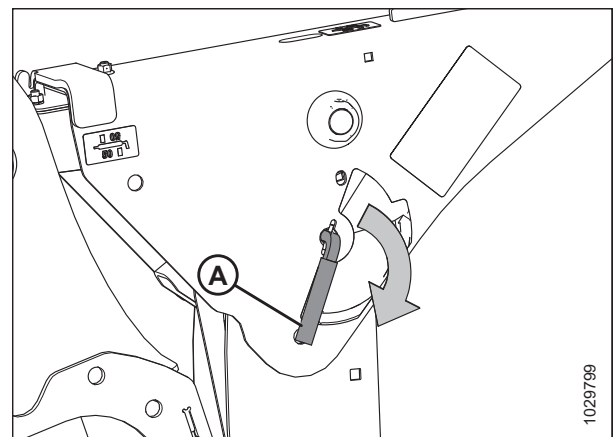


Figure 5.16: Safety Prop Lever



## ATTACHING A HEADER TO THE WINDROWER

### DANGER

Ensure that all bystanders have cleared the area.

22. Start the engine and press HEADER DOWN switch (A) on the GSL to fully lower the header.

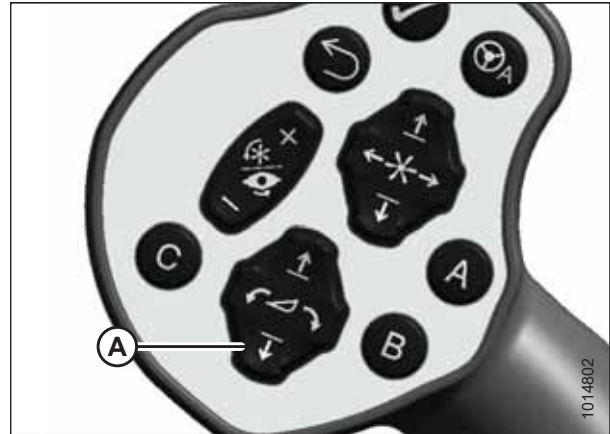


Figure 5.17: GSL

23. Press rotary scroll knob (A) on the HPT to highlight the QuickMenu options.
24. Rotate scroll knob (A) to highlight HEADER FLOAT symbol (B), and press the scroll knob to select it.



Figure 5.18: HPT Display

25. Turn scroll knob (A) to highlight left (B) or right (C) float and press knob (A) to activate the selection.
26. Rotate scroll knob (A) to adjust the float setting and press the knob to confirm your selection.

#### IMPORTANT:

Float adjustments of 1.0 (out of 10) change the header weight at the cutterbar by approximately 91 kg (200 lb.). Adjust the float in increments of 0.05 to fine-tune the header's performance.

27. Shut down the engine, and remove the key from the ignition.
28. Grasp one end of the draper header and lift. The lifting force should be 357 N (80 lbf.) and should be the same at both ends.
29. Proceed to [5.1.3 Connecting D1X or D1XL Series Draper Header Hydraulics](#), page 167.



Figure 5.19: HPT Display



## 5.1.3 Connecting D1X or D1XL Series Draper Header Hydraulics

Connecting the header's hydraulics to the windrower is a simple procedure, thanks to the hydraulic hose management system. There is an additional step to perform if you are switching from using a rotary header to using a draper header.

### IMPORTANT:

To prevent contamination of the hydraulic system, use a clean rag to remove dirt and moisture from all hydraulic couplers.

1. Push the link on latch (C) and pull handle (A) on hydraulic hose management system (B) rearward to disengage the arm from the latch.
2. Move hydraulic hose management system (B) toward the left cab-forward side of the windrower.

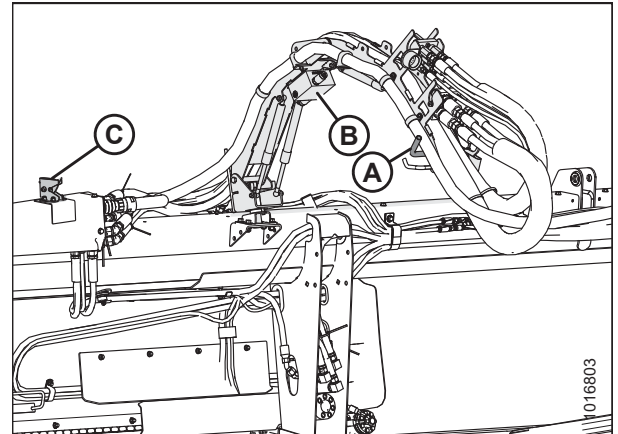


Figure 5.20: Hydraulic Hose Management System

3. Approach platform (A) on the left cab-forward side of the windrower and ensure the cab door is closed.
4. Push latch (B), and pull platform (A) toward the walking beam until it stops and the latch engages.

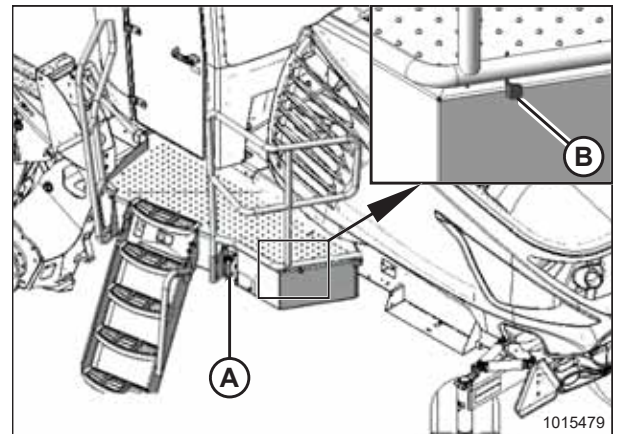


Figure 5.21: Left Cab-Forward Platform

5. Rotate left signal light placard (A) to the up (vertical) position before connecting the hose management system.

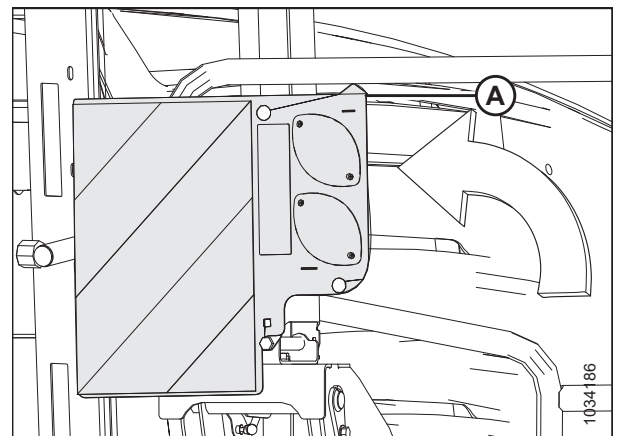


Figure 5.22: Left Signal Light Placard

## ATTACHING A HEADER TO THE WINDROWER

6. Connect hydraulic hose management system (A) to the windrower by securing ball joint (B) to latch support (C) on the windrower leg.

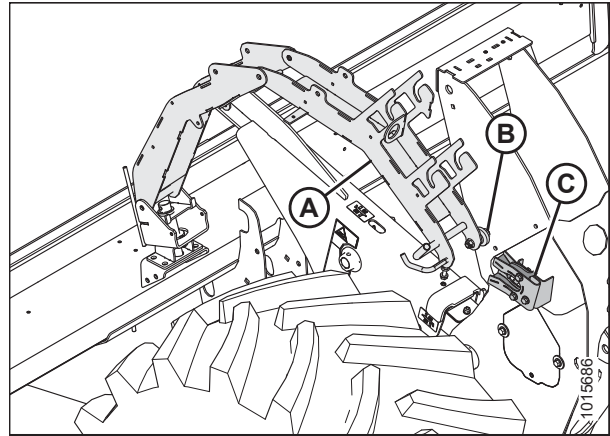


Figure 5.23: Hydraulic Hose Management System

7. Retrieve draper drive and reel control multicoupler (A) from the hydraulic hose management system.
8. Push knob (B) on the hydraulic receptacle and pull handle (C) fully away from the windrower.
9. Open cover (D) and position the coupler onto the receptacle. Align the pins in the coupler with the slots in handle (C) and push the handle toward the windrower so that the coupler locks onto the receptacle and knob (B) pops out.
10. Remove hose quick-disconnect (F) from the storage location and connect it to the receptacle on the frame.

### NOTE:

Hose quick-disconnect (F) is only present on M1170NT5 machines with the R1 Series Hydraulic Drive kit (MD #B6845) installed.

11. Remove the cover from electrical connector (E), push the electrical connector onto the receptacle, and secure it by turning the collar on the electrical connector clockwise.
12. Retrieve knife and reel drive multicoupler (A) from the hydraulic hose management system.
13. Push knob (B) on the hydraulic receptacle and pull handle (C) fully away from the windrower.
14. Open cover (D) and position the coupler onto the receptacle. Align the pins in the coupler with the slots in handle (C), and push the handle toward the windrower so that the coupler locks onto the receptacle and knob (B) snaps out.

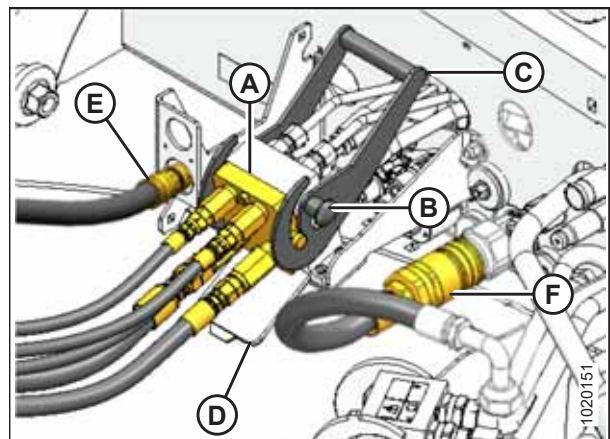


Figure 5.24: Draper/Reel Multicoupler

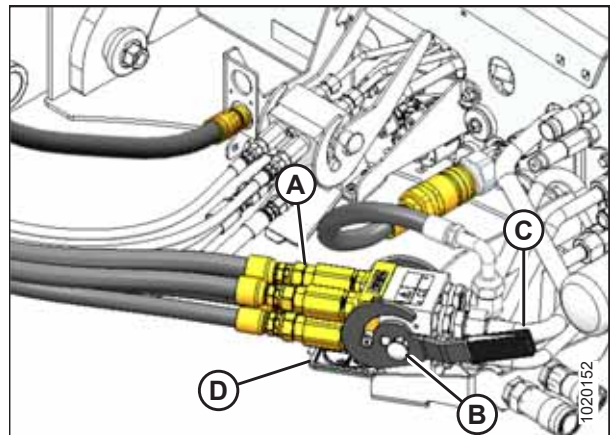


Figure 5.25: Knife/Reel Drive Multicoupler

## ATTACHING A HEADER TO THE WINDROWER

15. Ensure that the hydraulic hose routing is as straight as possible.

### IMPORTANT:

Straight routing will prevent abrasion damage to the hydraulic hoses.

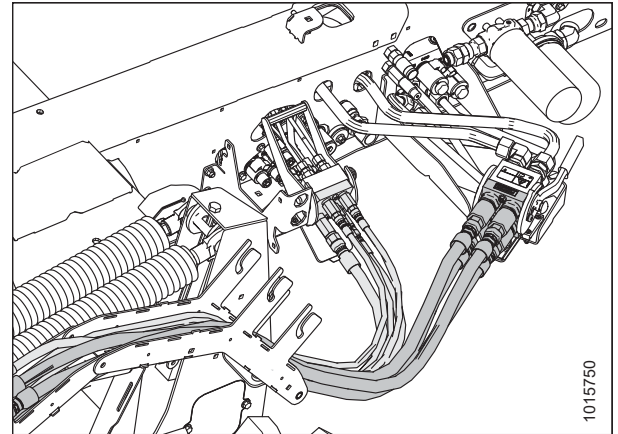


Figure 5.26: Hydraulic Multicouplers and Hose Routing

16. Push latch (A) to unlock platform (B).

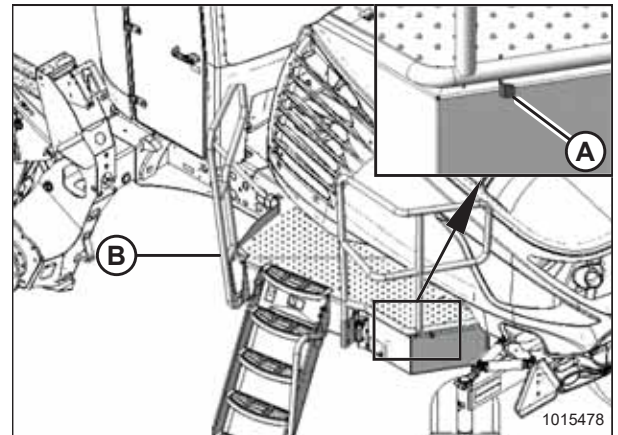


Figure 5.27: Left Cab-Forward Platform

17. Pull platform (A) towards the cab until it stops and the latch is engaged.

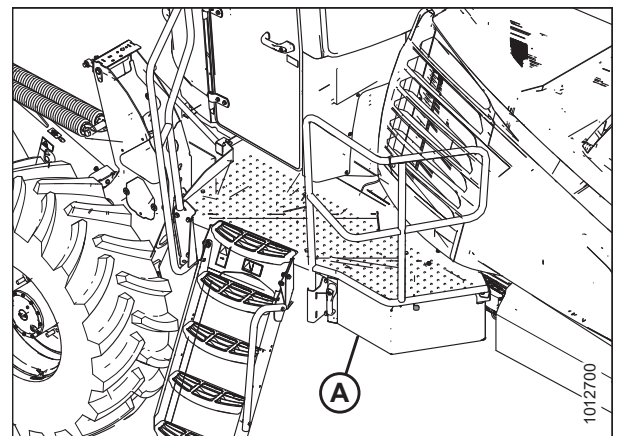


Figure 5.28: Left Cab-Forward Platform

### 5.1.4 Detaching D1X or D1XL Series Draper Header



#### DANGER

To prevent bodily injury or death from the unexpected startup of the machine, always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

## ATTACHING A HEADER TO THE WINDROWER

1. Lower the header fully.
2. Shut down the engine, and remove the key from the ignition.
3. Approach platform (A) on the left cab-forward side of the windrower and ensure the cab door is closed.
4. Push latch (B), and pull platform (A) toward the walking beam until it stops and the latch engages.

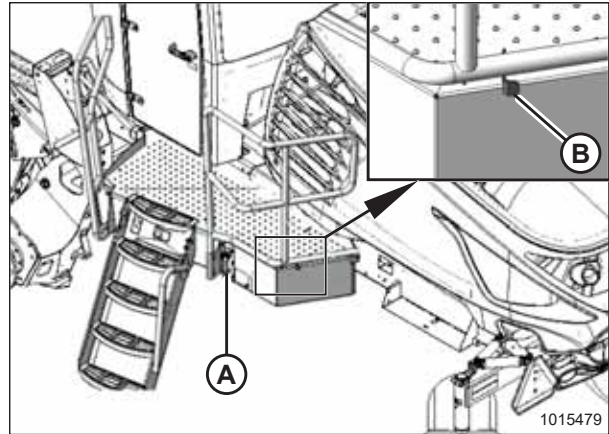


Figure 5.29: Left Cab-Forward Platform

5. Push lock button (A) and pull handle (B) to disengage multicoupler (C). Disconnect the hydraulics from the rear knife/reel drive receptacle.

### NOTE:

Firmly hold handle (B) when disconnecting multicoupler (C). Pressure may cause the handle to kick back with force.

6. Route knife/reel drive hose bundle back to storage position (D) on the hydraulic hose management system.
7. Remove any debris that may have accumulated on the receptacle. Close cover (E).

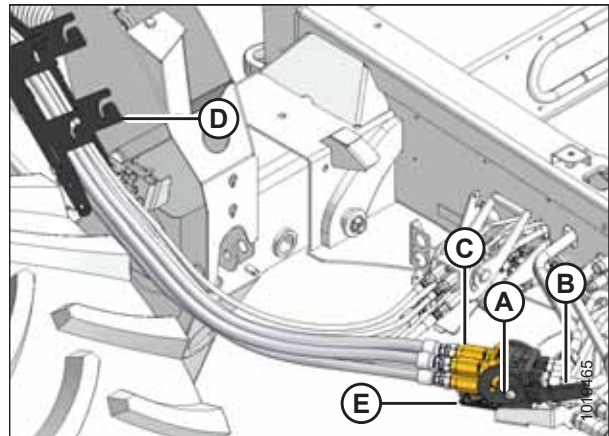


Figure 5.30: Knife/Reel Drive Multicoupler

8. Push lock button (B), and pull handle (C) to disengage multicoupler (A). Disconnect the hydraulics from the windrower draper drive/reel lift receptacle.
9. Disconnect electrical connector (E).
10. Remove any debris that may have accumulated on the windrower front receptacle, and close cover (D).

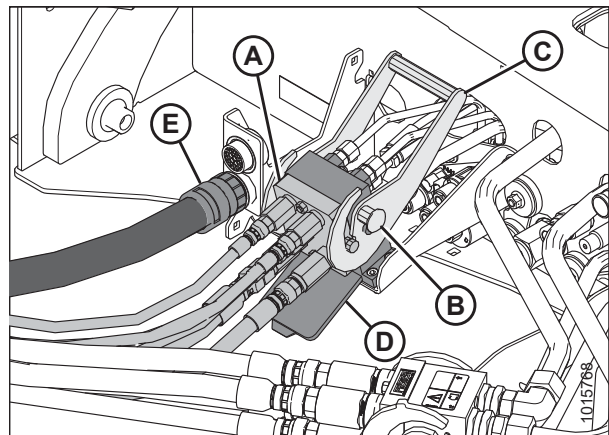


Figure 5.31: Draper/Reel Multicoupler



## ATTACHING A HEADER TO THE WINDROWER

11. Route draper drive/reel hose bundle back to storage position (A) on hydraulic hose management system (B).
12. Insert electrical connector into storage cup (C).

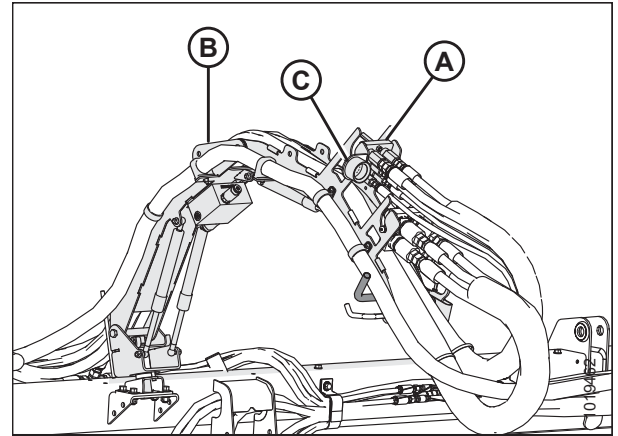


Figure 5.32: Hydraulic Hose Management System

13. Push latch (A) to unlock platform (B).

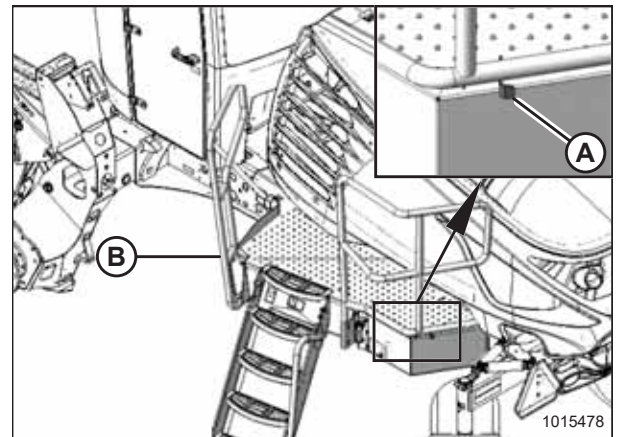


Figure 5.33: Left Cab-Forward Platform

14. Pull platform (A) towards the cab until it stops and the latch is engaged.

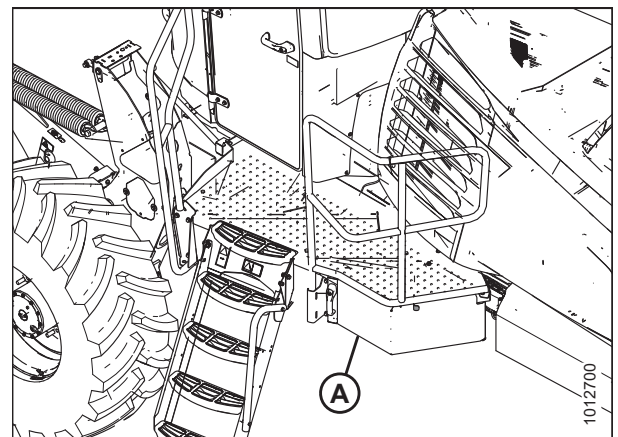


Figure 5.34: Left Cab-Forward Platform

## ATTACHING A HEADER TO THE WINDROWER

15. Disconnect hose management system (A) from windrower by pulling latch lever (B) to open the latch. Keep latch open and move hose management system (A) away from header with handle (C).

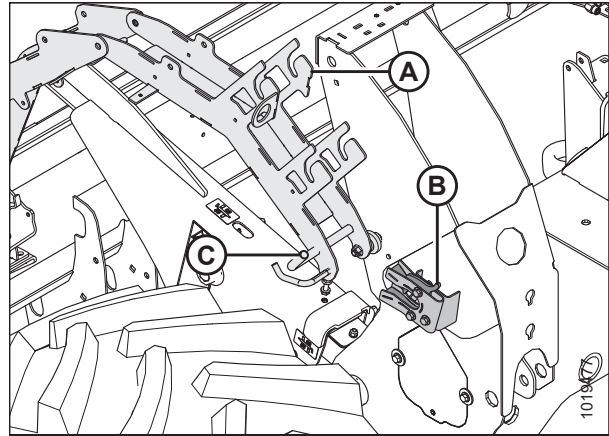


Figure 5.35: Hydraulic Hose Management System

16. Pivot hose management system (B) forward with handle (A), and engage hook (D) into latch (C) on header.

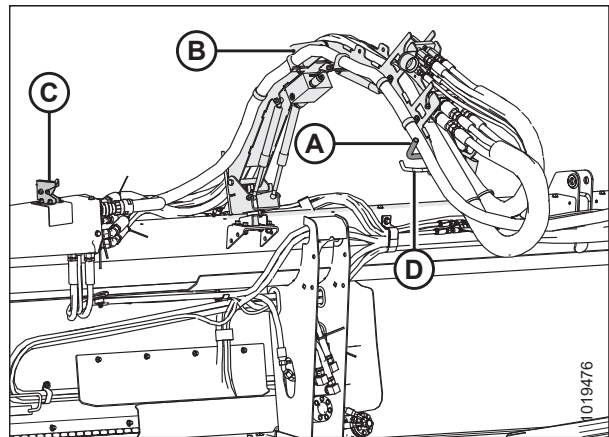


Figure 5.36: Hydraulic Hose Management System

17. Remove the header leg pin (B) by removing the hairpin (A) from header leg on both sides.
18. Lower header stand (D) by pulling spring loaded pin (C). Release spring pin to lock stand.

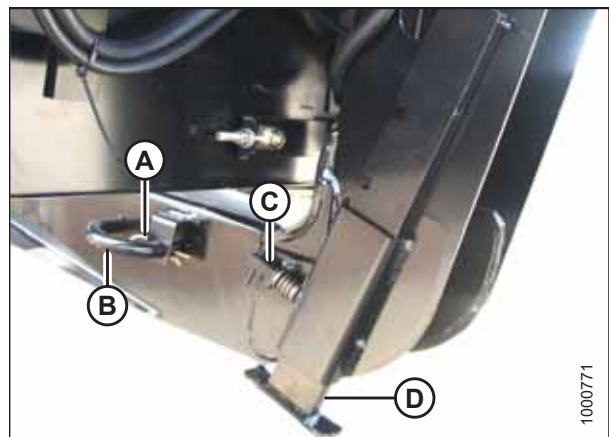


Figure 5.37: Header Stand

## ATTACHING A HEADER TO THE WINDROWER

19. **Windrowers with self-aligning center-link:** Release center-link latch (A) before returning to the cab.

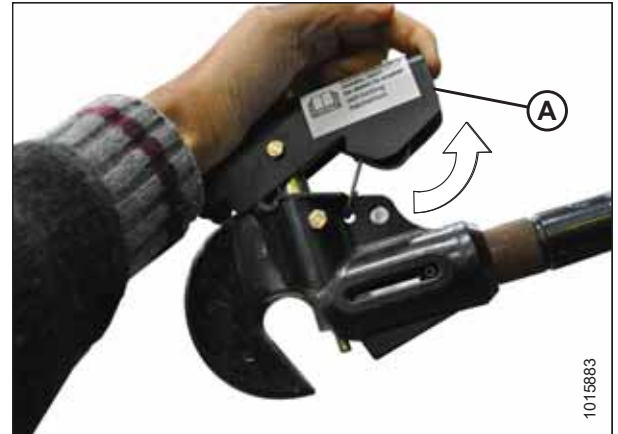


Figure 5.38: Center-Link

20. Disengage the safety props on both lift cylinders as follows:
  - a. Turn lever (A) away from the header to raise the safety prop until the lever locks into the vertical position.
  - b. Repeat the previous step for the opposite cylinder.

**NOTE:**

If the safety prop will **NOT** disengage, raise the header to release the prop.

21. Repeat for the opposite side.

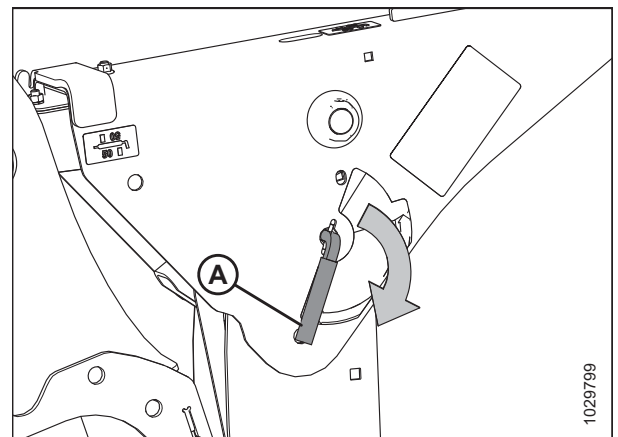


Figure 5.39: Safety Prop Lever

### **DANGER**

Ensure that all bystanders have cleared the area.

22. Start the engine.
23. Remove header float when prompted by the Harvest Performance Tracker (HPT).

**NOTE:**

If not prompted by the HPT to remove float, remove float manually.

24. Lower the header to the ground with HEADER DOWN switch (A).
25. Press HEADER TILT switches (B) as required on GSL to release load on center-link.

26. **Windrowers with self-aligning center-link:**

- a. Press REEL UP switch (C) to disengage center-link from header.
- b. Proceed to Step 28, page 174.

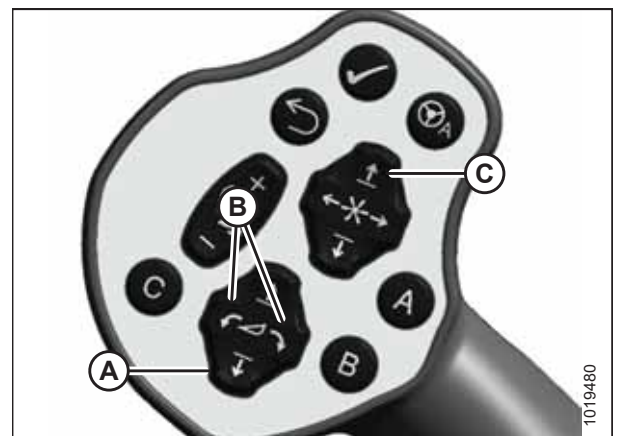


Figure 5.40: GSL

## ATTACHING A HEADER TO THE WINDROWER

27. **Windrowers without self-aligning center-link:**
- Shut off the engine and remove the key.
  - Disconnect center-link by lifting release (B) and lift hook (A) off header.



### **DANGER**

**Ensure that all bystanders have cleared the area.**

- Start the engine.

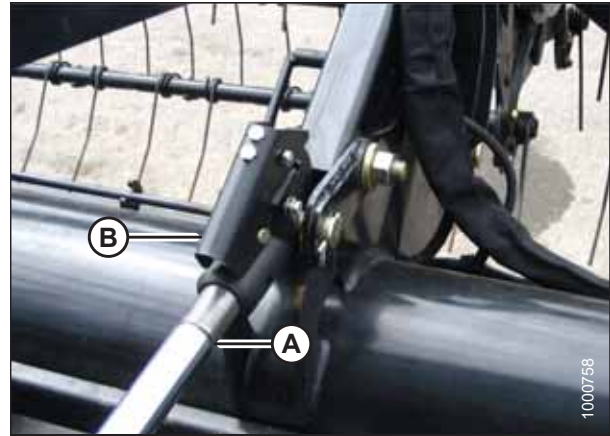


Figure 5.41: Hydraulic Center-Link

- Back windrower away from header.
- Reinstall pin (A) into header leg, and secure with hairpin (B). Repeat this step on the other header leg.

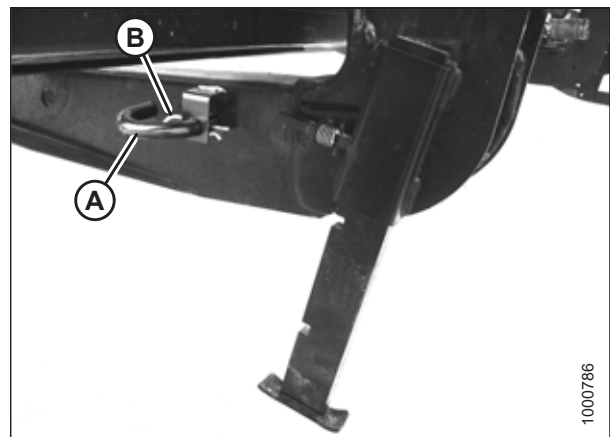


Figure 5.42: Header Stand



## Chapter 6: Reference

The reference section provides additional information on topics such as lubricants, fluids and their system capacities, fuel and torque specifications, and converting between metric and SAE measurements.

### 6.1 Lubricants, Fluids, and System Capacities

To prevent damage to the machine, do not exceed the stated capacity when filling a fluid reservoir.



#### WARNING

To avoid injury or death, do NOT allow ANY machine fluids to enter the body.

**Table 6.1 System Capacities**

Lubricant/Fluid	Location	Description	Capacity
Diesel exhaust fluid (DEF)	Diesel exhaust fluid tank	Must meet ISO 22241 requirements.	49 liters (13 U.S. gallons)
Moly grease	Sliding drive legs	Lithium complex base - extreme pressure (EP2) molybdenum disulphide content: 1.5-5% (NLGI Grade: 2)	As required unless otherwise specified
Grease	As required unless otherwise specified	SAE multi-purpose high temperature extreme pressure (EP2) performance with 1% max molybdenum disulphide (NLGI Grade 2) lithium base	As required unless otherwise specified
Diesel fuel	Fuel tank	Ultra low sulphur diesel (ULSD) Grade No. 2, or ULSD Grade No. 1 and 2 mix <sup>2</sup> ; refer to <a href="#">6.2 Fuel Specifications, page 177</a> for more information	518 liters (137 U.S. gallons)
Hydraulic oil	Hydraulic reservoir	Single grade transmission/hydraulic fluid (THF)  Recommend Viscosity: <ul style="list-style-type: none"> <li>60.1 cSt @ 40°C</li> <li>9.5 cSt @ 100°C</li> </ul>	60 liters (15.8 U.S. gallons) <sup>3</sup>
Gear lubricant	Gearbox	SAE 75W-140 or 80W-140, API service class GL-5 fully synthetic gear lubricant (SAE J2360 preferred)	2.3 liters (2.4 U.S. quarts)
Gear lubricant	Standard wheel drive	SAE 75W-140 or 80W-140, API service class GL-5 fully synthetic gear lubricant (SAE J2360 preferred)	1.4 liters (1.5 U.S. quarts)
Gear lubricant	High torque wheel drive	SAE 85W-140, API service class GL-5 fully synthetic gear lubricant	4.5 liters (4.8 U.S. quarts)
Antifreeze	Engine cooling system	ASTM D-6210 and CES-14603, Peak Final Charge Global™ or Fleetguard ES Compleat™ OAT <sup>4</sup>	31 liters (8.2 U.S. gallons)
Engine oil	Engine oil pan	SAE 15W-40 compliant with SAE specs for API Class SJ and CJ-4 engine oil	11 liters (11.6 U.S. quarts)
Air conditioning refrigerant	Air conditioning system	R134A	2.38 kg (5.25 lb.)

2. Optional when operating temperature is below 0°C (32°F).

3. Denotes capacity of a dry system. Refill capacity is 58 liters (15 U.S. gallons).

4. See the comments following this table.

## REFERENCE

**Table 6.1 System Capacities (continued)**

Lubricant/Fluid	Location	Description	Capacity
Air conditioning refrigerant oil	Air conditioning system total capacity	PAG SP-15	240 cc (8.1 fl. oz.)
Windshield washer fluid	Windshield washer fluid tank	SAE J942 compliant	4 liters (1 U.S. gallon)

If Peak Final Charge Global™ or Fleetguard ES Compleat™ OAT is unavailable: use a coolant concentrate or prediluted coolant intended for use with heavy duty diesel engines and with a minimum of the following chemical and physical properties:

- Provides cylinder cavitation protection according to a fleet study run at or above 60% load capacity.
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion.
- Coolant **MUST** be nitrite-free and **MUST** be free of 2-Ethylhexanoic (2-EH) acid.

**NOTE:**

M1 Series windrowers have Peak Final Charge Global™ coolant installed at the factory.

The additive package must be part of one of the following coolant mixtures:

- Ethylene glycol or propylene glycol base prediluted (40–60%) heavy duty coolant.
- Ethylene glycol or propylene glycol base heavy-duty coolant concentrate in a 40–60% mixture of concentrate with quality water.

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

**IMPORTANT:**

Do **NOT** use cooling system sealing additives or antifreeze that contains sealing additives.

## 6.2 Fuel Specifications

Use only ultra low sulphur diesel (ULSD) from a reputable supplier. For most year-round service, No. 2 ULSD fuel meeting ASTM specification D975 Grade S15 will provide good performance.

If the vehicle is exposed to extreme cold (below -7°C [20°F]) or is required to operate at colder-than-normal conditions for prolonged periods, use climatized No. 2 diesel fuel, or dilute the No. 2 ULSD fuel with 50% No. 1 ULSD fuel. This will provide better protection from fuel gelling or wax-plugging of the fuel filters.

**Table 6.2 Fuel Specifications**

Fuel	Specification	Sulphur (by weight)	Water and Sediment (by volume)	Cetane No. °C (°F)	Lubricity
ULSD Grade No. 2	ASTM D975	0.5% maximum	0.05% maximum	40 (104) minimum	520 Microns
ULSD Grade No. 1 and 2 mix <sup>5</sup>	n/a	1% maximum 0.5% maximum preferred	0.1% maximum	45–55 (113–130) cold weather / high altitude	460 Microns

In extreme situations, when available fuels are of poor quality or problems exist which are particular to certain operations, additives can be used; however, the engine manufacturer recommends consultation with the fuel supplier or engine manufacturer before using fuel additives. Situations where additives are useful include:

- A cetane improver additive can be used with low cetane fuels.
- A wax crystal modifier can help with fuels with high cold filter plugging points (CFPP).
- An anti-icer can help prevent ice formation in wet fuel during cold weather.
- An antioxidant or storage stability additive can help with fuel system deposits and poor storage stability.
- Diesel fuel conditioner can be used to increase the lubricity of fuels so that they meet the requirements given in Table 6.2, page 177.

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5. Optional when operating temperature is below 0°C (32°F).

## 6.3 Torque Specifications

The following tables provide torque values for various bolts, cap screws, and hydraulic fittings. Use these values only when no other torque value has been specified in a given procedure.

- Tighten all bolts to the torque values specified in the charts below, unless you are directed otherwise in this manual.
- Replace removed hardware with hardware of the same strength and grade.
- Use the torque value tables as a guide when periodically checking the tightness of bolts.
- Understand the torque categories for bolts and cap screws by reading the markings on their heads.

### *Jam nuts*

Jam nuts require less torque than nuts used for other purposes. When applying torque to finished jam nuts, multiply the torque applied to regular nuts by 0.65 to obtain the modified torque value.

### *Self-tapping screws*

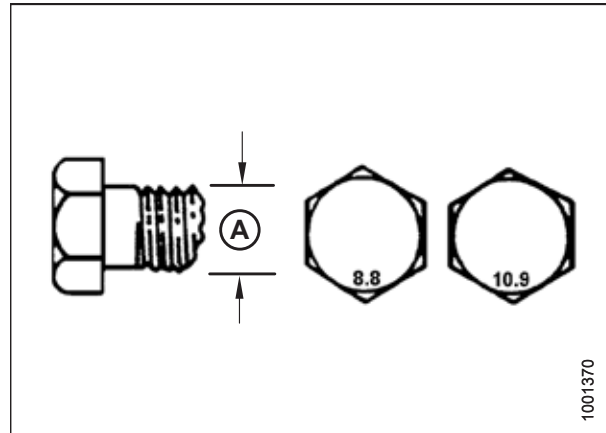
Use the standard torque values when installing self-tapping screws. Do **NOT** install self-tapping screws on structural or otherwise critical joints.

### 6.3.1 Metric Bolt Specifications

The torque values provided in the following metric bolt torque tables apply to hardware installed dry; that is, hardware with no grease, oil, or threadlocker on the threads or heads. Do **NOT** grease or oil bolts or cap screws unless directed to do so in this manual.

**Table 6.3 Metric Class 8.8 Bolts and Class 9 Free Spinning Nut**

Nominal Size (A)	Torque (Nm)		Torque (lbf-ft) (*lbf-in)	
	Min.	Max.	Min.	Max.
3-0.5	1.4	1.6	*13	*14
3.5-0.6	2.2	2.5	*20	*22
4-0.7	3.3	3.7	*29	*32
5-0.8	6.7	7.4	*59	*66
6-1.0	11.4	12.6	*101	*112
8-1.25	28	30	20	23
10-1.5	55	60	40	45
12-1.75	95	105	70	78
14-2.0	152	168	113	124
16-2.0	236	261	175	193
20-2.5	460	509	341	377
24-3.0	796	879	589	651



**Figure 6.1: Bolt Grades**

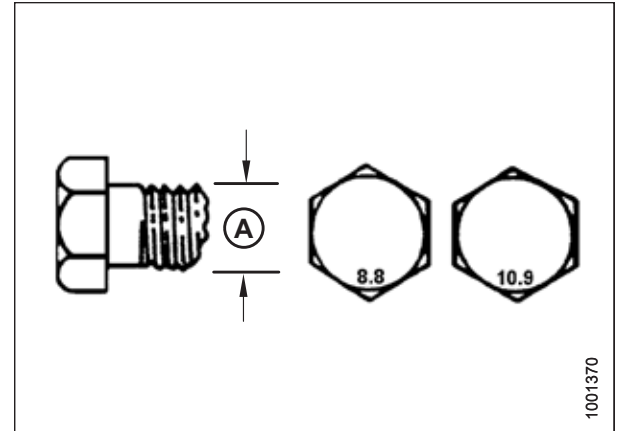
## REFERENCE

**Table 6.4 Metric Class 8.8 Bolts and Class 9 Distorted Thread Nut**

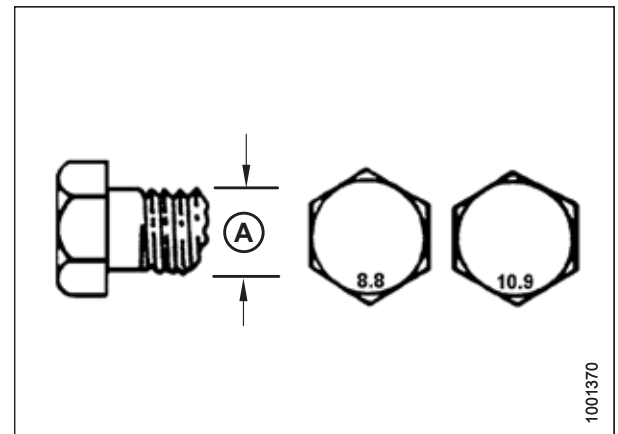
Nominal Size (A)	Torque (Nm)		Torque (lbf-ft) (*lbf-in)	
	Min.	Max.	Min.	Max.
3-0.5	1	1.1	*9	*10
3.5-0.6	1.5	1.7	*14	*15
4-0.7	2.3	2.5	*20	*22
5-0.8	4.5	5	*40	*45
6-1.0	7.7	8.6	*69	*76
8-1.25	18.8	20.8	*167	*185
10-1.5	37	41	28	30
12-1.75	65	72	48	53
14-2.0	104	115	77	85
16-2.0	161	178	119	132
20-2.5	314	347	233	257
24-3.0	543	600	402	444

**Table 6.5 Metric Class 10.9 Bolts and Class 10 Free Spinning Nut**

Nominal Size (A)	Torque (Nm)		Torque (lbf-ft) (*lbf-in)	
	Min.	Max.	Min.	Max.
3-0.5	1.8	2	*18	*19
3.5-0.6	2.8	3.1	*27	*30
4-0.7	4.2	4.6	*41	*45
5-0.8	8.4	9.3	*82	*91
6-1.0	14.3	15.8	*140	*154
8-1.25	38	42	28	31
10-1.5	75	83	56	62
12-1.75	132	145	97	108
14-2.0	210	232	156	172
16-2.0	326	360	242	267
20-2.5	637	704	472	521
24-3.0	1101	1217	815	901



**Figure 6.2: Bolt Grades**

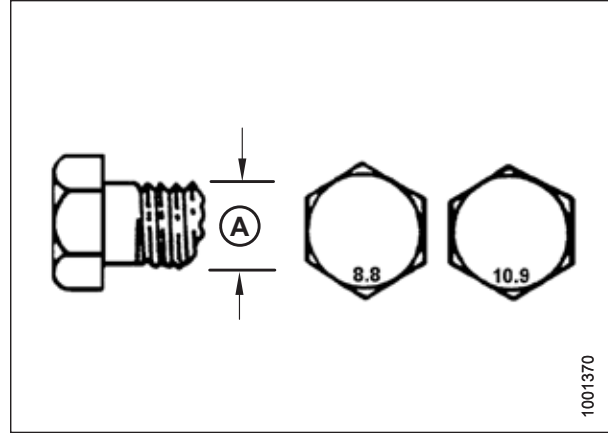


**Figure 6.3: Bolt Grades**

## REFERENCE

**Table 6.6 Metric Class 10.9 Bolts and Class 10 Distorted Thread Nut**

Nominal Size (A)	Torque (Nm)		Torque (lbf-ft) (*lbf-in)	
	Min.	Max.	Min.	Max.
3-0.5	1.3	1.5	*12	*13
3.5-0.6	2.1	2.3	*19	*21
4-0.7	3.1	3.4	*28	*31
5-0.8	6.3	7	*56	*62
6-1.0	10.7	11.8	*95	*105
8-1.25	26	29	19	21
10-1.5	51	57	38	42
12-1.75	90	99	66	73
14-2.0	143	158	106	117
16-2.0	222	246	165	182
20-2.5	434	480	322	356
24-3.0	750	829	556	614



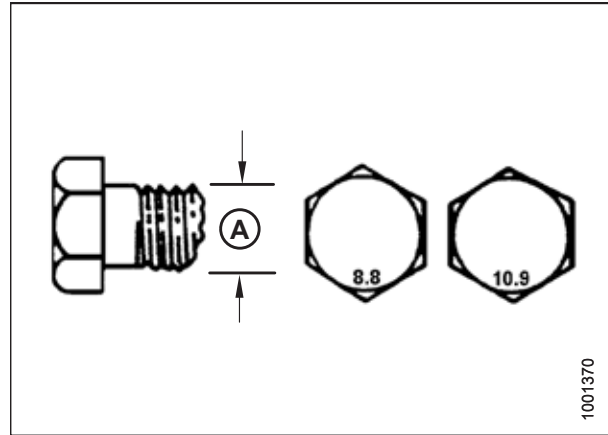
**Figure 6.4: Bolt Grades**

### 6.3.2 Metric Bolt Specifications Bolting into Cast Aluminum

The torque values provided in the following metric bolt torque tables apply to hardware installed dry; that is, hardware with no grease, oil, or threadlocker on the threads or heads. Do **NOT** grease or oil bolts or cap screws unless directed to do so in this manual.

**Table 6.7 Metric Bolt Bolting into Cast Aluminum**

Nominal Size (A)	Bolt Torque			
	8.8 (Cast Aluminum)		10.9 (Cast Aluminum)	
	Nm	lbf-ft	Nm	lbf-ft
M3	—	—	—	1
M4	—	—	4	2.6
M5	—	—	8	5.5
M6	9	6	12	9
M8	20	14	28	20
M10	40	28	55	40
M12	70	52	100	73
M14	—	—	—	—
M16	—	—	—	—



**Figure 6.5: Bolt Grades**

### 6.3.3 O-Ring Boss Hydraulic Fittings – Adjustable

The standard torque values are provided for adjustable hydraulic fittings. If a procedure specifies a different torque value for the same type and size of fitting found in this topic, use the value specified in the procedure instead.

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Back off lock nut (C) as far as possible. Ensure that washer (D) is loose and is pushed toward lock nut (C) as far as possible.
3. Check that O-ring (A) is **NOT** on the threads. Adjust O-ring (A) if necessary.
4. Apply hydraulic system oil to O-ring (A).

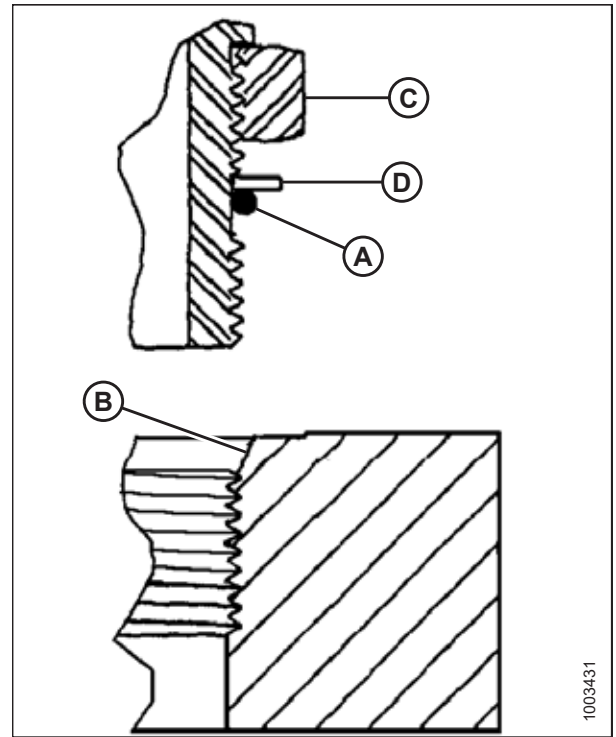


Figure 6.6: Hydraulic Fitting

5. Install fitting (B) into the port until backup washer (D) and O-ring (A) contact part face (E).
6. Position the angle fittings by unscrewing no more than one turn.
7. Turn lock nut (C) down to washer (D) and tighten it to the torque value indicated in the table. Use two wrenches, one on fitting (B) and the other on lock nut (C).
8. Check the final condition of the fitting.

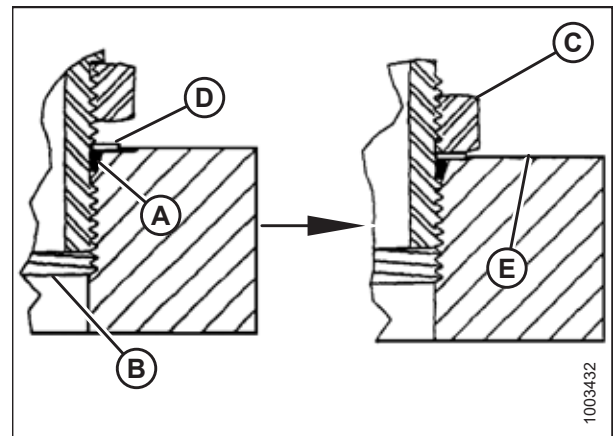


Figure 6.7: Hydraulic Fitting

Table 6.8 O-Ring Boss (ORB) Hydraulic Fittings – Adjustable

SAE Dash Size	Thread Size (in.)	Torque Value <sup>6</sup>	
		Nm	lbf·ft (*lbf·in)
-2	5/16–24	6–7	*53–62
-3	3/8–24	12–13	*106–115

6. Torque values shown are based on lubricated connections as in reassembly.

Table 6.8 O-Ring Boss (ORB) Hydraulic Fittings – Adjustable (continued)

SAE Dash Size	Thread Size (in.)	Torque Value <sup>7</sup>	
		Nm	lbf·ft (*lbf·in)
-4	7/16–20	19–21	14–15
-5	1/2–20	21–33	15–24
-6	9/16–18	26–29	19–21
-8	3/4–16	46–50	34–37
-10	7/8–14	75–82	55–60
-12	1 1/16–12	120–132	88–97
-14	1 3/8–12	153–168	113–124
-16	1 5/16–12	176–193	130–142
-20	1 5/8–12	221–243	163–179
-24	1 7/8–12	270–298	199–220
-32	2 1/2–12	332–365	245–269

### 6.3.4 O-Ring Boss Hydraulic Fittings – Non-Adjustable

The standard torque values are provided for non-adjustable hydraulic fittings. If a procedure specifies a different torque value for the same type and size of fitting found in this topic, use the value specified in the procedure instead.

Torque values are shown in the table below.

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Check that O-ring (A) is **NOT** on the threads. Adjust O-ring (A) if necessary.
3. Apply hydraulic system oil to the O-ring.
4. Install fitting (C) into the port until the fitting is hand-tight.
5. Torque fitting (C) according to values in Table 6.9, page 183.
6. Check the final condition of the fitting.

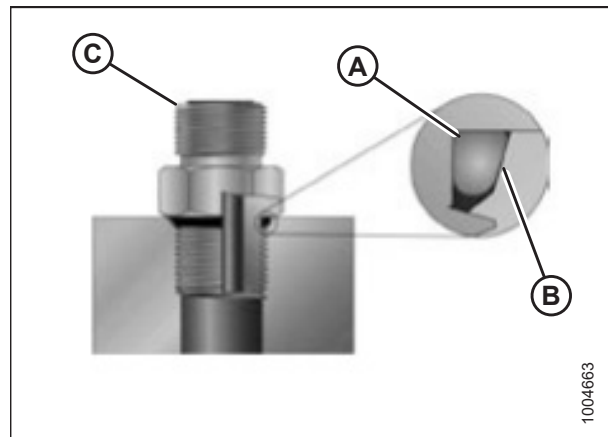


Figure 6.8: Hydraulic Fitting

7. Torque values shown are based on lubricated connections as in reassembly.



Table 6.9 O-Ring Boss (ORB) Hydraulic Fittings – Non-Adjustable

SAE Dash Size	Thread Size (in.)	Torque Value <sup>8</sup>	
		Nm	lbf·ft (*lbf·in)
-2	5/16–24	6–7	*53–62
-3	3/8–24	12–13	*106–115
-4	7/16–20	19–21	14–15
-5	1/2–20	21–33	15–24
-6	9/16–18	26–29	19–21
-8	3/4–16	46–50	34–37
-10	7/8–14	75–82	55–60
-12	1 1/16–12	120–132	88–97
-14	1 3/8–12	153–168	113–124
-16	1 5/16–12	176–193	130–142
-20	1 5/8–12	221–243	163–179
-24	1 7/8–12	270–298	199–220
-32	2 1/2–12	332–365	245–269

### 6.3.5 O-Ring Face Seal Hydraulic Fittings

The standard torque values are provided for O-ring face seal hydraulic fittings. If a procedure specifies a different torque value for the same type and size of fitting found in this topic, use the value specified in the procedure instead.

Torque values are shown in the table below.

1. Check the components to ensure that the sealing surfaces and the fitting threads are free of burrs, nicks, scratches, and any foreign material.



Figure 6.9: Hydraulic Fitting

8. Torque values shown are based on lubricated connections as in reassembly.

## REFERENCE

2. Apply hydraulic system oil to O-ring (B).
3. Align the tube or hose assembly so that the flat face of sleeve (A) or (C) comes into full contact with O-ring (B).
4. Thread tube or hose nut (D) until it is hand-tight. The nut should turn freely until it bottoms out.
5. Torque the fittings according to values in Table 6.10, page 184.

### NOTE:

If applicable, hold the hex flange on fitting body (E) to prevent the rotation of the fitting body and the hose when tightening fitting nut (D).

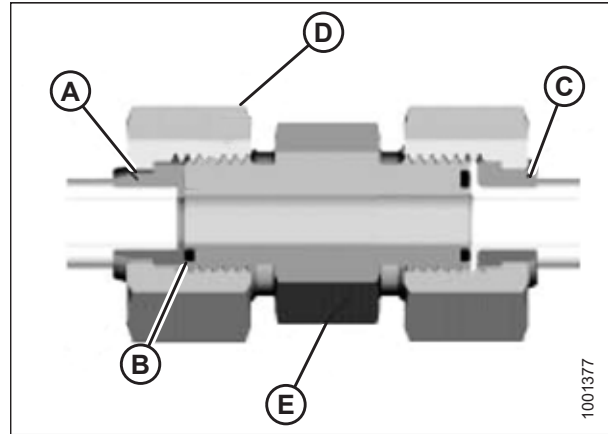


Figure 6.10: Hydraulic Fitting

6. Use three wrenches when assembling unions or joining two hoses together.
7. Check the final condition of the fitting.

Table 6.10 O-Ring Face Seal (ORFS) Hydraulic Fittings

SAE Dash Size	Thread Size (in.)	Tube O.D. (in.)	Torque Value <sup>9</sup>	
			Nm	lbf-ft
-3	Note <sup>10</sup>	3/16	–	–
-4	9/16	1/4	25–28	18–21
-5	Note <sup>10</sup>	5/16	–	–
-6	11/16	3/8	40–44	29–32
-8	13/16	1/2	55–61	41–45
-10	1	5/8	80–88	59–65
-12	1 3/16	3/4	115–127	85–94
-14	Note <sup>10</sup>	7/8	–	–
-16	1 7/16	1	150–165	111–122
-20	1 11/16	1 1/4	205–226	151–167
-24	1–2	1 1/2	315–347	232–256
-32	2 1/2	2	510–561	376–414

### 6.3.6 Tapered Pipe Thread Fittings

The standard torque values are provided for tapered pipe thread fittings. If a procedure specifies a different torque value for the same type and size of fitting found in this topic, use the value specified in the procedure instead.

Assemble pipe fittings as follows:

1. Check the components to ensure that the fitting and the port threads are free of burrs, nicks, scratches, and any other form of contamination.
2. Apply paste-type pipe thread sealant to the external pipe threads.
3. Thread the fitting into the port until it is hand-tight.

9. Torque values and angles shown are based on lubricated connection as in reassembly.

10. O-ring face seal type end not defined for this tube size.

## REFERENCE

4. Torque the connector to the appropriate torque angle. The turns from finger tight (TFFT) and flats from finger tight (FFFT) values are shown in Table 6.11, page 185. Make sure that the tube end of a shaped connector (typically a 45° or 90° elbow) is aligned to receive the incoming tube or hose assembly. Always finish the alignment of the fitting in the direction of tightening. Never back off (i.e., loosen) the threaded connectors to achieve alignment.
5. Clean all residue and any excess thread conditioner with an appropriate cleaner.
6. Assess the final condition of the fitting. Pay special attention to the possibility of cracks in the port opening.
7. Mark the final position of the fitting. If a fitting leaks, disassemble the fitting and check it for damage.

### NOTE:

The failure of fittings due to overtightening may not be evident until the fittings are disassembled and inspected.

**Table 6.11 Hydraulic Fitting Pipe Thread**

Tapered Pipe Thread Size	Recommended TFFT	Recommended FFFT
1/8-27	2-3	12-18
1/4-18	2-3	12-18
3/8-18	2-3	12-18
1/2-14	2-3	12-18
3/4-14	1.5-2.5	12-18
1-11 1/2	1.5-2.5	9-15
1 1/4-11 1/2	1.5-2.5	9-15
1 1/2-11 1/2	1.5-2.5	9-15
2-11 1/2	1.5-2.5	9-15

## 6.4 Conversion Chart

Both SI units (including metric) and US customary units (sometimes referred to as standard units) of measurement are used in this manual. A list of those units along with their abbreviations and conversion factors is provided here for your reference.

**Table 6.12 Conversion Chart**

Quantity	SI Units (Metric)		Factor	US Customary Units (Standard)	
	Unit Name	Abbreviation		Unit Name	Abbreviation
Area	hectare	ha	$\times 2.4710 =$	acre	acres
Flow	liters per minute	L/min	$\times 0.2642 =$	US gallons per minute	gpm
Force	Newton	N	$\times 0.2248 =$	pound force	lbf
Length	millimeter	mm	$\times 0.0394 =$	inch	in.
Length	meter	m	$\times 3.2808 =$	foot	ft.
Power	kilowatt	kW	$\times 1.341 =$	horsepower	hp
Pressure	kilopascal	kPa	$\times 0.145 =$	pounds per square inch	psi
Pressure	megapascal	MPa	$\times 145.038 =$	pounds per square inch	psi
Pressure	bar (Non-SI)	bar	$\times 14.5038 =$	pounds per square inch	psi
Torque	Newton meter	Nm	$\times 0.7376 =$	pound feet or foot pounds	lbf-ft
Torque	Newton meter	Nm	$\times 8.8507 =$	pound inches or inch pounds	lbf-in
Temperature	degrees Celsius	°C	$(^{\circ}\text{C} \times 1.8) + 32 =$	degrees Fahrenheit	°F
Velocity	meters per minute	m/min	$\times 3.2808 =$	feet per minute	ft/min
Velocity	meters per second	m/s	$\times 3.2808 =$	feet per second	ft/s
Velocity	kilometers per hour	km/h	$\times 0.6214 =$	miles per hour	mph
Volume	liter	L	$\times 0.2642 =$	US gallon	US gal
Volume	milliliter	mL	$\times 0.0338 =$	ounce	oz.
Volume	cubic centimeter	cm <sup>3</sup> or cc	$\times 0.061 =$	cubic inch	in. <sup>3</sup>
Weight	kilogram	kg	$\times 2.2046 =$	pound	lb.

## 6.5 Definitions

The following terms, abbreviations, and acronyms may be used in this instruction.

Term	Definition
A Series Header	MacDon A40D, A40DX, and Grass Seed auger headers
API	American Petroleum Institute
ASTM	American Society of Testing and Materials
Bolt	A headed and externally threaded fastener designed to be paired with a nut
Center-link	A hydraulic cylinder connection between the header and the vehicle, which is used to change the angle of the header relative to the vehicle
CGVW	Combined gross vehicle weight
D1X Series Header	MacDon D115X, D120X, and D125X rigid draper headers for M1 Series Windrowers
D1XL Series Header	MacDon D130XL, D135XL, D140XL, and D145XL rigid draper headers for M1 Series Windrowers
DDD	Double-draper drive
DEF	Diesel exhaust fluid; also known as AdBlue in Europe, and AUS 32 in Australia
DEF supply module	A pump that supplies diesel exhaust fluid through the exhaust aftertreatment system
DK	Double knife
DKD	Double-knife drive
DOC	Diesel oxidation catalyst
DWA	Double Windrow Attachment
EEC	Eco engine control
Engine-forward	Windrower operation with Operator and engine facing in direction of travel
FFFT	Flats from finger tight
Finger tight	Finger tight is a reference position in which the given sealing surfaces or components are making contact with each other and the fitting has been tightened by hand to a point where the fitting is no longer loose and cannot be tightened further by hand
GSS	Grass Seed
GVW	Gross vehicle weight
Hard joint	A joint made with use of a fastener where joining materials are highly incompressible
Header	A machine that cuts and lays crop into a windrow when attached to a windrower
Hex key	A tool of hexagonal cross-section used to drive bolts and screws that have a hexagonal socket in the head (internal-wrenching hexagon drive); also known as an Allen key
HDS	Hydraulic deck shift
hp	Horsepower
HPT display	Harvest Performance Tracker display module on an M1 Series Windrower
JIC	Joint Industrial Council: A standards body that developed standard sizing and shape for original 37° flared fitting
Knife	A cutting device found on a header's cutterbar which uses a reciprocating cutter (also called a sickle) to cut crop so that it can be fed into the header
MDS	Mechanical Deck Shift
M1 Series Windrowers	MacDon M1170, M1170NT, M1170NT5 and M1240 Windrowers
n/a	Not applicable
NPT	National Pipe Thread: A style of fitting used for low-pressure port openings. Threads on NPT fittings are uniquely tapered for an interference fit

## REFERENCE

Term	Definition
Nut	An internally threaded fastener designed to be paired with a bolt
ORB	O-ring boss: A style of fitting commonly used in port openings on manifolds, pumps, and motors
ORFS	O-ring face seal: A style of fitting commonly used for connecting hoses and tubes. This style of fitting is also commonly called ORS, which stands for O-Ring Seal
PARK	The slot opposite the NEUTRAL position on operator's console of M1 Series windrowers
R1 SP Series	MacDon R113 and R116 Rotary Disc Headers for windrowers
R2 SP Series	MacDon R216 Rotary Disc Headers for windrowers
SAE	Society of Automotive Engineers
SCR	Selective catalytic reduction
Screw	A headed and externally threaded fastener that threads into preformed threads or forms its own thread when inserted into a mating part
SDD	Single-drawer drive
SK	Single knife
SKD	Single-knife drive
Soft joint	A flexible joint made by use of a fastener in which the joining materials compress or relax over a period of time
spm	Strokes per minute
Tension	An axial load placed on a bolt or screw, usually measured in Newtons (N) or pounds (lb.). This term can also be used to describe the force a belt exerts on a pulley or sprocket
TFFT	Turns from finger tight
Torque	The product of a force * the length of a lever arm, usually measured in Newton-meters (Nm) or foot-pounds (lbf·ft)
Torque angle	A tightening procedure in which a fitting is assembled to a specified tightness (usually finger tight) and then the nut is turned farther by a specified number of degrees until it achieves its final position
Torque-tension	The relationship between the assembly torque applied to a piece of hardware and the axial load it induces in a bolt or screw
ULSD	Ultra-low sulphur diesel
Washer	A thin cylinder with a hole or a slot located in the center, used as a spacer, a load distribution element, or a locking mechanism
Windrower	The power unit for a header

# Predelivery Checklist

Perform these checks and adjustments prior to delivery to your Customer. Complete this checklist and provide it to the Dealer or the Operator.



## CAUTION

Carefully follow the instructions given. Be alert for safety related messages that bring your attention to hazards and unsafe practices.

Windrower Serial Number:

Engine Serial Number:

### M1170NT5 Windrower Predelivery Checklist

✓	Item	Reference
	Check for shipping damage or missing parts. Be sure all shipping dunnage is removed.	—
	Check for loose hardware. Tighten to required torque.	<a href="#">6.3 Torque Specifications, page 178</a>
	Check tire air pressures and adjust as required.	<a href="#">4.1.14 Checking Tire Pressure, page 132</a>
	Check wheel drive hub lubricant level.	<a href="#">4.1.12 Checking and Adding Wheel Drive Lubricant, page 131</a>
	Check engine coolant level and strength at pressurized coolant tank.	<a href="#">4.1.6 Checking Engine Coolant Level, page 115</a>
	Check air cleaner and clamps.	<a href="#">4.1.3 Checking Engine Air Intake, page 113</a>
	Check engine oil level and check for leaks.	<a href="#">4.1.7 Checking and Adding Engine Oil, page 116</a>
	Check hydraulic oil level and check for leaks along lines.	<a href="#">4.1.4 Checking and Adding Hydraulic Oil, page 113</a>
	Check fuel separator for water and foreign material, drain and clean as necessary, and add fuel.	<a href="#">4.1.5 Checking Fuel Separator, page 115</a>
	Check gearbox lubricant level.	<a href="#">4.1.8 Checking Engine Gearbox Lubricant Level and Adding Lubricant, page 117</a>
	Check tension of A/C compressor belt.	<a href="#">4.1.9 Checking Air Conditioning Compressor Belt, page 119</a>
	Check that machine is completely lubricated.	<a href="#">3.20.2 Grease Points, page 104</a>
	Check Operator's Presence System.	<a href="#">4.2.1 Checking Operating Safety System, page 133</a>
	Check horn operation.	<a href="#">4.2.7 Checking Horn, page 150</a>
	Check with authorized MacDon Representative on regional settings for signal lighting logic and speed.	—
	Advise customer where to install registration plates.	<a href="#">4.1.2 Advising Customer where to Install Registration Plates, page 112</a>
	<b>Start engine and run to operating temperature.</b>	<a href="#">4.1.10 Starting Engine, page 119</a>
	Check HPT, fuel, and diesel exhaust fluid (DEF) gauges for operation.	<a href="#">4.2.2 Checking Harvest Performance Tracker Display Gauges, page 134</a>
	Check engine speed on HPT.	<a href="#">4.2.3 Checking Engine Speed, page 140</a>
	Check that narrow transport's retract and extend features are functioning properly.	<a href="#">4.2.4 Checking Retract and Extend Functions of the Narrow Transport System, page 141</a>
	Ensure selective catalytic reduction (SCR) conditioning inhibit is off.	<a href="#">4.2.5 Checking Selective Catalytic Regeneration Conditioning Mode, page 146</a>
	Check that air conditioning and heater are functioning properly.	<a href="#">4.2.9 Checking Climate Controls, page 151</a>

## REFERENCE

✓	Item	Reference
	Check that interior lights are functioning properly.	<a href="#">4.2.8 Checking Interior Lights, page 151</a>
	Check that exterior lights are functioning properly.	<a href="#">4.2.6 Checking Exterior Lights, page 147</a>
	Check that hazard lights, signal lights, and turn signal repeater lights are functioning properly.	<a href="#">4.2.6 Checking Exterior Lights, page 147</a>
	Check that beacons are functioning properly (if installed).	<a href="#">4.2.6 Checking Exterior Lights, page 147</a>
	Check that white clearance lights are functioning properly.	<a href="#">4.2.6 Checking Exterior Lights, page 147</a>
	Test the secondary brakes (windrowers sold in Germany only)	<a href="#">4.2.12 Testing Secondary Brakes – Windrowers Sold In Germany Only, page 154</a>
	Complete the header's Predelivery Checklist (if applicable).	—
	Check that manuals are in the windrower manual case.	<a href="#">4.3 Checking Manuals, page 157</a>
	Remove plastic coverings and windshield decal from cab interior.	<a href="#">4.4 Performing Final Steps, page 158</a>

**Date Checked:**

**Checked by:**





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